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HOME IMPROVEMENT THROUGH SCHOOL INSTRUCTION

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Homemaking is a family job. The father, mother, and children are all responsible for the home. Instruction at school should constantly keep this in mind. Girls must not be made dissatisfied with their homes or to feel that what they are learning at school cannot be used at home. Seven years of field work have led to the conclusion that parents are most interested in two things: that their children shall have a better opportunity for education and better home conditions than they themselves had. When parents provide the opportunity to go to high school, the school must see to it that this better education results in better home conditions. In vocational education the agricultural program is planned to increase the income in order that living conditions for the family may be better, while the home economics program aims to teach women and girls to be better homemakers in order that the family may have better homes.

For some time Alabama teachers in the agricultural and home economics departments of vocational high schools have exchanged classes, sometimes for two or three lessons, sometimes for as many as ten. The boys were given instruction in nutrition. It is as important for a boy to know how to feed himself as to feed the stock on the farm. Table manners and simple cooking were included in the program. The girls were usually taught the use of tools, simple repair jobs about the house, and yard improvement. The response from both groups was excellent, both in increased interest in the work of the other department, and in personal value to the students.

Last year it seemed desirable to find out what could be done without interfering with the work already planned and three schools were asked to work on such a joint program. At Straughn the home improvements

most generally needed seemed to be screening the houses and draining the home grounds, and these jobs were undertaken in as many homes as possible. At Blue Springs the pupils and teachers decided upon a yard improvement and general repair program to reach every home. At Lineville the original plan called for an intensive program of exterior and interior improvement in two homes, each of which had a boy and a girl in the vocational classes, but the work grew until the intensive program was carried out in seven homes and a lesser one in eighteen others.

This experience made it seem desirable to devote some time to such a joint piece of work in the summer schools of instruction for vocational teachers. One day was given by the home economics teachers to a discussion of the possibilities of a joint program, agencies through which it could be carried out, and methods for putting it over. At the agricultural school of instruction a committee was appointed who studied the problem and presented a report which was openly discussed by the entire group. As a result, suggestions were drawn up for the types of lessons which might be taught in the exchange of all-day classes, joint evening schools, vocational clubs, and family projects, and this material was mimeographed and distributed early in the school year.

The state department of education cooperated by arranging for a home economics and an agricultural field agent to make joint visits to nineteen schools. Previous to a visit letters were written to the county superintendent, principal, and vocational teachers of the school, asking for a conference on the proposed joint program.

General plans were talked over, including the needs of that community and methods of developing the work. The suggestion was made that if the school attempted to put on such a program a three-year general plan should be worked out with a detailed program for the first year. These discussions lasted from an hour to three hours. Each school was requested not to decide that day but to wait perhaps a week or ten days and have another meeting without the state representatives. Emphasis was placed on the planning of a conservative program which would not interfere with other things to be done, which would not become burdensome, and which could be carried on from year to year.

A number of schools have sent in their plans, extracts from which follow:

Blue Springs: Home improvements. Cleaning up premises; general repairs; yards (levelling and sodding); sanitary toilets; beautifying home grounds; improving furnishing and furniture; screening the house; removing and preventing household pests.

Alliance: Specific objectives for general three-year program: Improved nutrition in community; home improvement and beautification in community; beautification of school grounds.

Corner: A three-year plan for one home. First year: A. Remodeling two front rooms: new floor; varnishing floors and woodwork; papering; refinishing furniture. B. Building new barn.

Second year: A. Remodeling house: cutting top down. B. Painting. C. Lawn: grading; drainage; setting shrubs; planting grass.

Third year: A. Installing home water system: hydraulic ram; installing water in tenant houses.

Straughn: Home Improvement community program. First year: Exterior, general repairs around the home; interior, providing adequate shelves, closets, and cupboards.

At the request of the home economics teachers, girls in second year classes have written articles about the changes made in their homes since they began taking home economics. In the following excerpts the girls refer to help given by other members of the family.

The backyard was in bad condition. It had begun to wash away, so I decided I wanted to do something to keep it from washing. I got my brother to help me and he hauled some dirt and made a terrace around the edge of the yard and then took a road slip and dragged some rich soil and filled up the low places. My mother and I planted flowers and now we have a very beautiful yard.

Our parents helped us select the paper and the curtains. We can make the curtains and also sofa pillows for the davenport and chairs. My father is going to, with help, put up the paper as soon as it comes. We are hoping to have the whole house attractive and comfortable.

I have learned what an ideal kitchen consists of. Although we didn't have the required things to make one, we have rearranged to make it a step-saving one. We raised the working surfaces, put all the working surfaces close together so as to save all the steps possible and not have to retrace steps. I am still working on the kitchen and I really expect to make an ideal step-saving kitchen so that it will not be a drudgery to think of preparing and serving a meal.

I was making some box furniture and needed the help of my little brothers. I promised to make them a seat and a place to keep their own things as books, toys, and marbles, if they would help me. They were awfully good about it and made lids for the boxes. We had almost a party one night carding the cotton to pad the seats with. Mama and Papa popped corn while we worked. I made some candy for them. They enjoyed it and the subjects we talked of were beneficial to them. Mama taught us how to card cotton and she knew

more about making box furniture than I. We do not have any except what I made, for she had not had time to work with it.

First let me tell you of what the family has done as a whole. Our house is a bungalow type and did have five rooms with a long hall the length of the house. In remodeling it, we tore away our large back porch and added three rooms, a bedroom, a bathroom, and a breakfast room. Half-way down the hall we put in French doors, giving us a nice reception hall and a spacious dining room with a large window facing the west, so now we have plenty of light in our dining room. Between the reception hall and the living room we also put French doors, fixing it so if we wanted it we can have a large living room. After remodeling the house we had it painted both inside and outside.

The main thing I did in remodeling it was in helping to plan how to remodel it, which I learned when taking home economics. The year before my project was 'beautifying my room.' In doing this I repainted my bedroom furniture, made new draperies for the windows, and made footstools to match the draperies.

Since remodeling the house I have painted all the floors, made new draperies for several rooms, and have planned color schemes for the different rooms. I have refinished the dining room furniture and also that of a bedroom.

In my first year I was talking one night to the family about how badly the house looked on the outside. It was once painted white and was now dirty and the paint was flaking off. I asked my father if he was not able to have the house repainted. He became interested and said that it needed a new roof and porches also. He started right away having the house fixed. He had it painted a cream where it would not get dirty so quickly. It looks much better now.

This program is new in Alabama. It may not go on as we have planned it. Changes will surely have to be made. Already there is increased interest with county superintendents, principals, teachers, and parents. To the home economics supervisor it brings increased pleasure in her work, and relief from much of the labor of promoting interest and acquainting administrative officers and other teachers with its aims. We firmly believe that the day is not far distant when it will be easy to recognize homes which have in them students in vocational classes or even when a community in which such work is being carried on will reflect its influence in the general character of its homes.

THE EDUCATION OF WOMEN FOR LEISURE

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Said the tramp, "If time were money, I'd be a millionaire." To most of us the tramp's interpretation of leisure in terms of idleness would make it a questionable blessing. Probably the simplest definition of leisure is opportunity to choose freely a congenial avocation. The author of a recent magazine article entitled, "Leisure for What?" defines leisure as the surplus of time definitely needed for daily practical tasks, and speaks of it as an "essentially modern phenomenon," a "by-product of man's conquest of nature." "One of the outstanding defects in our modern education," he continues, "is that it takes no account of leisure as a permanent factor in our life."

Leisure came upon the great mass of us suddenly after centuries of continuous labor, and we are not yet properly adjusted to the new conditions. Our ancestors considered unceasing toil a necessary and unavoidable circumstance of life for all but a favored few, whereas a scientist recently prophesied that four hours of work a day would eventually suffice for the physical needs of life. All but a comparatively small part of our working population at the present time is working on an eight-hour day basis.

The laboring man who worked twelve hours or more a day and the woman in the home who worked incessantly found it necessary to spend the hours not given to work in sleep. It can hardly be said that either had any conception of what Browning calls "the wild joy of living." We have come to realize that "it is a false philosophy of life that would keep us ever getting ready to live, without enjoying life in the process of getting ready."

In accepting the new philosophy, however, we have made a mistake in assuming that leisure and happiness are synonymous. The shorter working day is constantly discussed but very little consideration has been given to the problem of what will be done with the leisure when we get it. Many thoughtful people believe that we are less fit for leisure than any previous generation. The old-time artisan was accustomed to self-expression in his daily work and carried this power of expression over to his leisure. Nowadays the tasks of countless thousands are uninteresting, mechanical, and dulling, and there is a closing-in of the fields of self-expression until, as some one has described it, "Our souls sit

on the bleachers and watch a game played, no longer by us but for us." As industry becomes less interesting, there is a tendency to demand more excitement in the leisure hours. Children are perhaps the greatest sufferers from this effect of our civilization, for they need the elemental experiences for full development. With narrowed experiences for self-expression, fewer contacts with elemental things, less direct responsibility and discipline, they are demanding more vivid experiences and are finding unwholesome outlets. Thus the question as to how the leisure will be spent becomes a very vital problem. This "social surplus of time" may be a real menace to our civilization unless we educate people for leisure, adding to the capacity of individuals to appreciate, evaluate, and enjoy.

Until recently, much of the ethical training gained by living came definitely through work, but with changing conditions of work for large numbers of people, it is felt that this ethical training must come chiefly through leisure. The great need of the present seems to be a proper balance of work and leisure, with leisure so employed that it will definitely minister to the constant development of character. It has been well said that "the great waste of ill-spent leisure consists not solely in the vice that ensues but lies more in the virtue that was not developed."

When we review briefly the demands of an educated leisure and the specific education required to meet such demands, we find that on both subjects the suggestions made in this paper sum up ideas advocated by leaders in education, sociology, and philosophy, focusing them for the consideration of this particular subject. The first need that stands out is for a greater appreciation of the best in music, art, and literature. The mass of individuals will always be consumers along these lines, rather than producers, so that these subjects should be taught with a special view to developing appreciation and raising the standard of things enjoyed and delighted in. It is frequently suggested that with our park concerts, radios, victrolas, moving pictures, shop windows, beautiful colors in textile fabrics, free books, and cheap reproductions of pictures we have potentialities for truer democracy in esthetics than in politics. It remains for us to develop all of these channels of potential power for arousing appreciation for the best in music, art, and literature. We have already made remarkable progress in raising the standards of good taste in dress and house furnishings. The great mass of our people wear more artistic clothes and have more attractive, comfortable homes than is the case with any other nation. It is in the more abstract fields of appreciation that we are still lacking—so lacking that it sometimes

seems that "when the people lift themselves and get their economic rights, housing and sanitation take the place of beauty."

The second need is for training in civic responsibility, political intelligence, and international understanding and sympathy. This calls for courses in history, civics, government, sociology, psychology, and political science. Good texts and good interpreters are needed to tell the whole truth and to make hero-worshippers for heroes worthy to be worshipped—books and teachers which awaken the pioneer spirit in all worthy fields, which foster scholarship and service, and which respect and honor the best traditions and efforts of all races. This means a broader conception of patriotism, and the realization that to love other countries more is not to love our own less. It also offers the possibility that future generations may learn to do away with wars, to evolve a true political democracy, and to push vigorously the movements that improve the social environment of all and give social protection to the abnormal and undeveloped.

Another need is that every girl, as well as every boy, be trained for a vocation. Every girl must be prepared for some other vocation than homemaking, not simply because it is the only sound economic and social policy but also because only through such experience will she reach her highest development. During the years of active parental responsibility, for many women the former vocation becomes the avocation, keeping them in touch with the outside world and providing a change and rest from the homemaking job.

Leisure, we must remember, is not necessarily play but free choice of what to do in the hours not needed for the main job. With most of her children born before she is thirty-five and with wholesale industrialization of household work, the mother and homemaker finds herself early in life with leisure which may go to service to the community, to vocational enterprise, or to what some one has termed "spurious culture." Society has lost much through the wrong use of leisure on the part of married women above forty or fifty years of age. For many of them there has been no pursuit of a steady purpose, no setting up of a worthy goal, and no measurable achievement.

The great movement, well under way, for providing social protection for the abnormal, the weak, the unprotected, creates a necessity for better training for social service. It means more psychology, sociology, economics, ethics, and child-welfare teaching in our schools and colleges. This training, together with women's natural gifts of intuition, sympathy, and power of inspiration, will make it possible for a very large number

to make a rich contribution to society by the performance of the same sort of tasks outside the home that they have been performing in the home. The nurture of child life, the moral safeguarding of youth, the care of the weak and aged, have been woman's special tasks in the past and are still her main business. Such tasks make a worthy challenge to the leisure hours. They also challenge the unmarried as well as the married woman, except that in case of the former, unremunerated social service or professional employment frequently becomes her vocation and main business in life, rather than an avocation to supplement her homemaking.

In addition to these three needs in the education of women—appreciation of the best in music, art, and literature; better preparation for political responsibility and community service; and training for self-support—there is a fourth and most important one—training for parenthood and homemaking. Many seem to believe that marital love and maternal instinct will supply all the knowledge and skill necessary for training children and adjusting delicate human relations. In a recent article entitled "What's Wrong with the Home?" by Miriam Van Waters, the charge against parents is that they "have refused to be educated." "Intrusted with the task of rearing, sheltering, nourishing, and guiding the most complex organism that life has produced, they insist upon relying on tradition, whims, prejudices, and religious sanctions." There is reason to believe, however, that the rising generation will have a greater appreciation of the need of training for parenthood, because of the better opportunities open and freer discussion of parental responsibilities. Our new nursery schools, child welfare institutes, courses in child psychology, human relationships, ethics, history of the family, sanitation, and dietetics are all definitely planned to help women meet intelligently the demands of parenthood and homemaking. We are beginning, like Robert Owen of one hundred years ago, "to look with royal eyes on children."

There is a direct relation between education for homemaking and the use of leisure. The home is the ideal place for many of the leisure hours of husband and children. The manner in which the woman spends her leisure hours will pretty largely determine how many leisure hours the rest of the family spend at home. I would make the vocation of the homemaker the creating of the home atmosphere and of spiritual values, the adjustment of human relations, the training of socialized human beings, the searching out of psychological and social means to a more adequate human life, for we have arrived at the point where family

solidarity rests on these social ideals rather than merely on an economic or material basis. I would make her avocation the restoring to home life something of its old spirit of adventure and creation and of its "homeliness" by introducing more of the elemental things for children and some of the processes of cooking and sewing. I would have cooking in the home, in so far as it falls within the old French definition of "a refined labor of love," and I would have sewing in so far as it gives opportunity for self-expression and makes the homemaker feel more truly an economic partner in the business of homemaking.

This reverses the old order, in which the physical processes occupied the center of the stage, and such leisure hours as remained were given to the training of children and the adjustment of social relationships. The two functions go hand in hand and some of the more interesting and creative processes of work must apparently be retained in order to aid in the education of children and to give proper self-expression for the homemaker. It has been well said that "the home, in forfeiting its homeliness, has lost much of its emotional and imaginative appeal. The application of so-called 'modern conveniences' to everything has made the home a little dull."

If the younger generation, beset perhaps with more temptations and difficulties than previous ones, is to be properly trained for leisure, parents must seek very early and consciously to educate their children in fine ethical standards; to help them set up worthy goals and to train them in making right choices. Children can best get the necessary training in reverence, good manners, consideration of others, love of service, fair play, and honesty—the things that make for pleasant human intercourse—through the intelligent, sympathetic mother in the home.

The function of home economics is, therefore, to train this intelligent parent so that she, in turn, may begin early with the training of the little child. Our potential parent must see the relations of food, clothing, and shelter in a world of significant connections. She must have background courses in science, art, and economics, and an understanding of the social and psychological relationships. She must not say with Margaret Fuller, "I accept the universe," but rather must she accept existing conditions with reservations and optimism in the spirit of John Burroughs, when he said "I accept the universe as solvent and worthy of trust."

THE DIGESTIBILITY OF POTATOES AS INFLUENCED BY METHODS OF PREPARATION

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It is generally stated and accepted that fried foods are more indigestible than foods prepared by other methods. The reasons usually advanced in explanation of this statement are that fat inhibits gastric secretion and motility and that the fat surrounds the food particles, especially the starch granules, and prevents the enzymes from acting until the fat is digested.

That fat inhibits gastric secretion and motility has been demonstrated to be an unquestionable fact.

The inhibition of gastric secretion by fat was first demonstrated by Pavlov (1). More recently it has been shown by Lim, Ivy, and McCarthy (2), that, although fat in the stomach exerts a slight inhibitory influence on gastric secretion, fat in the duodenum and upper intestine causes a marked inhibition of secretion, which occurs even when the stomach is vagotomised and not in "enteric" connection with the intestine.

The minimal amount of fat necessary to inhibit gastric secretion, given straight or mixed with other foods, has not been accurately determined. Pavlov used 50 cc. or more of olive oil in his experiments and Ivy, Lim, and McCarthy used 30 cc. of olive oil in their experiments, the olive oil being unmixed with food. The gastric secretory response to 600 cc. of milk and of cream has been studied (1), but the quantity of fat in the cream was not determined.

That fat inhibits gastric motility has been satisfactorily demonstrated by Cannon (3). Cannon used fat as such, and mixed with food. The fat content of his mixed meals was fifty per cent. So far as we can find, the minimal amount of fat required to inhibit gastric motility given straight or mixed with food has not been accurately determined.

With regard to the possibility that fat surrounds the starch molecule and prevents, or rather delays, digestion, Daniels and Strichers (4) studied the digestibility of starch in typical batter (pastry) and dough mixtures. They found that the pastry was digested as readily as the dough, and concluded that the digestive disturbances following the ingestion of pastry are attributable to some factor other than the inability of the digestive juices to act on the starch. They suggested that

the explanation lies in part, at least, in the fact that some pastry is insufficiently cooked.

Since the problem presented here has not been attacked by strictly physiological methods and because frying is a much-used method of food preparation, we have attempted to devise and perform experiments which might show whether or not fried foods are more indigestible than foods prepared by other methods. Potatoes were chosen for our study because of their universal use and because of their low fat content, simple composition, and ease of uniform preparation.

We desire to thank Dr. F. C. Koch for helpful suggestions concerning the digestion experiments.

Methods. The Early Ohio was the variety of potato used throughout. It was selected because of its high protein content, which helps it to retain its shape while cooking. This was important because in order to be assured of uniform results on the absorption of fat by the potato, the amount of surface exposed to the fat should be kept approximately uniform.

Kettle-rendered pure lard of good quality was chosen for frying. The frying was done in an iron pot fitted with a wire basket and in an iron skillet, each measuring eight inches in diameter.

The potatoes in every experiment were cut with a potato slicer into pieces $2\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$ inches. These pieces were soaked for thirty minutes in water at room temperature to insure a constant water content, drained, and dried with a cloth. They were then cooked as follows:

No. 1. French fried. The pieces of potato were placed in the wire frying basket and immersed in fat 2 inches deep heated to 202°C. They were fried for 4 minutes and drained on paper. This method was selected because the Bureau of Home Economics of the U. S. Department of Agriculture recommends it as one giving a well-cooked product, good-looking, golden-brown, tasty, crisp, and with the absorption of the minimum amount of fat.

No. 2. Pan fried. The pieces of potato were placed in a skillet containing fat $\frac{1}{4}$ inch deep heated to 80–100°C. They were fried for 5 minutes at that temperature. Then the temperature was gradually increased to 140°C., the potatoes being fried until they were as brown as the No. 1 potatoes, which took 5 minutes. The pieces were turned constantly to insure uniform cooking. They were then drained on paper. This method of frying was selected because it has been shown by us that more fat is absorbed when the cooking is prolonged and the temperature of frying low.

No. 3. Boiled. The pieces, prepared as for frying, were immersed in boiling water and cooked until they were tender (20 minutes). The water was saved for use in the experiments, as described beyond.

The change in water and fat content. It was important to determine the loss and gain of water, because of the well-known rôle which water plays in digestive processes. The results, given in table 1, show that approximately 43 per cent of water is lost when the potato is French fried, 46 per cent when it is pan fried, and that when the potato is boiled 4 per cent of water is taken up.

TABLE 1

Changes in water and fat content of potatoes caused by methods of preparation

CHANGE	METHOD OF PREPARATION		
	French fried	Pan fried	Boiled
	per cent	*per cent*	*per cent*
Water gained (+) or lost(−)	−43.00	−46.00	+4.00
	−42.70	−46.00	+4.00
	−42.80	−45.80	+4.00
Average amount of fat absorbed in 10 experiments	7.18	12.55	

The results on the absorption of fat by the potato when fried by the two methods show a difference in the amount of fat taken up. One hundred grams of potato took up on the average 7.18 grams of fat when French fried and 12.55 grams when pan fried.

The in vitro digestibility of potatoes prepared by different methods. In order to determine the digestibility of the potatoes prepared by different methods, in vitro experiments were made. After cooking, the potatoes were ground and mixed thoroughly in a mortar. Five grams (calculated on the basis of raw material less fat absorbed) of potato were placed in a 250 cc. Florence flask and 100 cc. of redistilled water was added. After mixing the contents thoroughly by shaking and warming to 40°C., 10 cc. of a fresh pancreatin solution (0.2 gram of pancreatin mixed well with 100 cc. of water in a volumetric flask) was added. The mixture was kept in a water bath at 40°C. for 30 minutes, it being agitated regularly every two minutes during this period. It was then removed from the bath, boiled for five minutes, cooled, diluted to 200 cc., and filtered. The quantity of reducing sugar in 25 cc. of the filtrate was determined by the Munsen-Walker method.

In the case of the boiled potato, in order to avoid any loss of potato as starch in the cooking water in our experiments, we used an aliquot portion

of the cooking water in place of distilled water in preparing the digestion mixture. In order to control the possibility that the presence of fat may facilitate the digestion of starch by pancreatic juice, sufficient fat was added to the boiled potatoes to equal the fat content of the "pan fried" potatoes.

The results of these experiments are shown in table 2, and are quite obvious. The starch of the pan fried is more easily digested than that of the French fried potato, and that of the French fried more easily than that of the boiled potato. The data further show that the addition of fat, in the amount used, to the boiled potato renders the starch of the potato more easily digested by pancreatic juice. In other experiments it was found that casein, if substituted for the fat in the mixture, would also facilitate the digestion of the starch.

TABLE 2

Milligrams of dextrose obtained from potatoes prepared in different ways when digested by pancreatin and by pancreatic juice.[1]

METHOD OF DIGESTION	METHOD OF PREPARATION			
	French fried, fat content 7.18 per cent	Pan fried, fat content 12.55 per cent	Boiled	Boiled, plus 12.55 per cent fat
By pancreatin	55.4	65.9	40.6	46.0
	54.1	65.9	40.5	45.5
	54.5	62.2	40.6	45.2
	55.4	63.6	39.3	44.8
	55.1	64.0	41.1	45.6
	56.8	65.9	40.5	45.5
	55.3	66.0		
By pancreatic juice	58.6	62.2	51.8	56.2
	62.2	66.9	51.4	56.6
	59.5	65.9	50.8	55.8
	62.2	66.3	51.2	56.1
	60.0	65.9	51.8	56.2
	62.2	66.8		

[1] The more variable results with pancreatic juice are due to the fact that the juice used was obtained on different days from the same chronic pancreatic fistula dog.

A few experiments were made in which the potatoes were sliced instead of being prepared in the French fried form. This was done because when potatoes are pan fried they usually are sliced. It was found that the sliced pan fried potato contained 4.85 grams per 100 grams of potato more fat than potato No. 2; but there was no difference in their digestibility.

The gastric emptying time of potatoes prepared by different methods. The emptying from the stomach of potatoes prepared by the various methods was studied in two dogs, four men, and one woman. All were in excellent health.

No breakfast was taken on the day of the experiment. The potato meal was prepared as follows: 100 grams of the cooked potato was ground with a mortar and 40 grams of barium sulphate was added. A sufficient amount of water was added to make the water content and hence consistency equal in all cases (from 74 to 77 cc. of water in the case of the fried potatoes and none in the case of the boiled). This meal was ingested with 100 cc. of water. The dogs were given 150 grams instead of 100 grams of potato.

Potatoes in four forms were fed. The French fried or No. 1 potatoes; the pan fried or No. 2 potatoes; the boiled potatoes; and the boiled potatoes plus 37.5 grams of fat, an amount three times that of fat present in the pan fried potatoes.

Fluoroscopic observations were made at 15 or 30 minute intervals, beginning usually 2 hours after the meal. By this method the emptying time was quite accurately determined.

It should be mentioned that none of the subjects expressed a dislike for the meal. However, subject E. D. and Miss S. expressed some distaste for the "boiled-potato-excess-fat" meal.

The results obtained with the dogs are given in table 3 and show that the boiled potatoes without fat were emptied from the stomach more quickly than the fried potatoes, but that there was no difference in the rate of emptying with French fried and pan fried potatoes. In other words, in the dogs 7 per cent of fat was sufficient to cause a delay in the emptying time of the stomach, but there was no difference in the rate at which potatoes with 7 per cent and 12.5 per cent fat were emptied. The delay in one dog (Queen) was 2 hours, in the other (Kate) 1 hour. The 37.5 per cent fat in the boiled potato caused a marked delay, 3 hours in one dog and almost 5 in the other.

In human subjects the results (table 4) show that there was no material difference in the gastric emptying time of boiled and fried potatoes with the exception of one subject (Miss S.) in whom the results are not uniform. We interpret the results in this subject as showing that the pan fried potatoes were emptied at a slightly (30 minutes) slower rate than the boiled and French fried potatoes. The results obtained from the potatoes with 37.5 per cent fat show that the excess fat caused a delay in emptying time. In one subject the delay was ½ hour, in three subjects

TABLE 3

Time required for complete emptying of stomach of dogs after feeding of 150 grams of potatoes prepared in different ways

DOG	METHOD OF PREPARATION			
	French fried, fat content 7.18 per cent	Pan fried, fat content 12.55 per cent	Boiled	Boiled plus 37.5 per cent fat
	hours	*hours*	*hours*	*hours*
Kate	3.5	3.0	2.75	6.0
	4.0	4.5	2.75	7.0
	4.0	4.0	3.00	6.0
	4.0	4.0	2.75	6.0
Average	3.8	3.8	2.80	6.2
Queen	4.5	5.0	3.0	8.0
	5.5	5.5	3.0	7.5
	5.5	5.0	3.0	7.5
	5.0	5.0	3.0	8.0
Average	5.1	5.1	3.0	7.7

TABLE 4

Time required for complete emptying of stomach of human subjects after feeding of 100 grams of potatoes prepared in different ways

SUBJECT	METHOD OF PREPARATION							
	French fried, fat content 7.18 per cent		Pan fried, fat content 12.55 per cent		Boiled		Boiled plus 37.5 per cent fat	
	hours	*minutes*	*hours*	*minutes*	*hours*	*minutes*	*hours*	*minutes*
A. C. I.	2	30	2	40	2	45	3	15
	2	50	2	30	2	45	3	15
Average	2	30	2	35	2	45	3	15
E. C. L.	2		2		1	45	3	15
	2		2		2		3	30
Average	2		2		1	52	3	22
G. C.	2	30	2	30	2	30	4	
	2	30			2	30	4	
Average	2	30	2	30	2	30	4	
E. D.	2	30	2	30	2	30	5	
	2	15	2	40	2	30	3	
Average	2	22	2	35	2	30	4	
Miss S.	3	40	5		4		7	
	3	45	5		5		7	
Average	3	42	5		4	30	7	

1½ hours, in another 2½ hours. The longest delay occurred in the latter subject (Miss S.) who showed a delay of ½ hour when pan fried potatoes were ingested.

Discussion. As was anticipated, the potatoes fried by the pan fried method—in cold fat—took up more fat than when fried by the French fried method—in hot fat. The hot fat presumably quickly sealed the surface of the potato, preventing the penetration of the fat into the center of the slice of potato.

The fact that the starch of the boiled potato was less digestible than that of French fried potato and that of French fried less digestible than that of pan fried potato, we believe is best accounted for by the difference in cooking. The boiled potato was cooked at 100°C. for 20 minutes, the French fried at 200°C. for 4 minutes, and the pan fried at 80–100°C. for 5 minutes and at 140°C. for 5 minutes. In the pan fried potato the fat penetrated the potato more thoroughly than in the French fried and resulted in a more thorough cooking. Since we found that the addition of fat to boiled potato increases the rate of digestion of the potato, it might be argued that the greater digestibility of the pan fried potato is due to its greater fat content. However, the increment in digestibility due to fat does not account, except in part, for the greater digestibility of the pan fried potato.

The results of the study of the gastric emptying time of the potatoes prepared in different ways apparently show that the dog's stomach is more susceptible to fat than the stomach of man. In man, neither 7.1 nor 12.5 gm. of fat delayed the emptying time, except in one case, whereas 10.5 gm. caused a delay in both dogs. The delay caused by the "excess-fat-potatoes" was comparably greater in the dog than in man. The difference in the amount of food fed, or the difference in the size of man and dog, may be factors which might explain the difference. An adequate explanation has not occurred to us.

In both man and dog there was not a sufficient difference in the fat content of French fried and pan fried potatoes to cause any difference in emptying time except in one subject (Miss S.). In other words, the stomach was unable to differentiate between a difference of 7.1 gm. and 12.5 gm. of fat when mixed with 100 gm. of potatoes.

It is evident then, that in the average human subject, no matter how the potato is cooked, it will be emptied from the stomach in the same time; but that the pan fried potato will be digested more rapidly than the boiled or French fried potato. On the other hand, if after cooking the potato is handled in such a way that it stands in fat, or if fat is added

in the form of gravy or butter, a delay of gastric emptying will occur, as shown by our results on potatoes ingested with excess fat. Also the results with one of our subjects (Miss S.) in whom the gastric emptying was delayed by 12.5 gm. and not by 7.1 gm. of fat, as well as the results on our dogs, show that the motor activity of the stomach of some individuals is more susceptible to the inhibitory action of fat than others. Obviously such individuals, in order to avoid a gastric disturbance, must limit the amount of fat ingested.

Summary. 1. The starch of potatoes fried in cold fat is more easily digested by pancreatic juice than that of boiled potatoes and of potatoes fried in hot fat. We believe that this difference is due to a difference in the thoroughness of cooking. Fat, in the amounts used, facilitated the rate of digestion of starch by pancreatic juice.

2. In dogs, boiled potatoes were emptied from the stomach at a faster rate than fried potatoes. There was no appreciable difference in the rates at which pan fried (12.5 per cent fat) and French fried (7.1 per cent fat) were emptied.

3. In four of five human subjects the potatoes whether boiled or fried were emptied from the stomach at the same rate. In one subject boiled potatoes were emptied in a shorter time than pan fried potatoes (12.5 per cent fat). "Excess fat" (37.5 per cent fat) with boiled potatoes caused quite a marked delay in emptying.

4. The gastric motor mechanism of some individuals is more susceptible to the inhibitory action of fats than others. In susceptible individuals a digestive disturbance, when it occurs, is more probably due to disturbed gastric motility than to alleged decrease in the digestibility of the potato due to the presence of fat.

5. In the average normal individual fried potatoes, unless steeped in fat, are no more likely to cause digestive disturbances than boiled potatoes.

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THE NEBRASKA RURAL KITCHEN

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Information on the lighting, ventilation, sanitation, attractiveness, equipment, and arrangement of the kitchen is needed as a basis for the selection of research problems and as subject matter to be used in teaching, and to indicate common faults which might be corrected if they were realized by those responsible.

In the hope of obtaining such information an analysis was made of 371 kitchen scores which had been made by Nebraska women in the home management extension classes in 1925 who scored their own kitchens after receiving instructions from the state extension specialist in household management. About 65 per cent were in the corn belt area and about 35 per cent in the range and pasture area in the western part of the state. The great majority of the kitchens were in farm houses; the exact proportion of small town kitchens included is not known, as some of those classed as farm kitchens may have belonged in the town group, but the town kitchens probably do not represent much more than 7 per cent in all.

The score card used is given below, together with the explanation sent out with it:

SCORE CARD FOR KITCHENS

I. Light and ventilation		20
Sufficient natural light	3	
Artificial light in good location	8	
Doors and windows screened	7	
Transom or window board	2	
II. Ceiling, walls, woodwork, floors		10
Sanitation	5	
Attractiveness	5	
III. Kitchen plumbing		20
Running water	15	
Disposal of waste water	5	
IV. Furnishings and equipment		30
Working surfaces	5	
Storage space	5	
Sink	5	
Stoves	5	
Stool	5	
Refrigerator	5	

V. Arrangement of equipment..... 20
For food preparation..... 10
For cleaning..... 10

Total 100

EXPLANATION

I. Lighting and ventilation
(a) Windows on two sides of the room with glass area one-fifth of floor area. Windows not less than 34 inches from floor.
(b) Artificial lighting, gas, electric, or acetylene, so located as to cast light to working surfaces, stove, table, and sink. Center ceiling fixture and wall light above sink, if necessary.
(c) Screen doors with spring to close quickly and fitted well to door. Window screen hung from the top to permit them to swing open or be removed.
(d) A transom above the outside door to be used in the winter months when doors and windows are closed. A window board to permit circulation of air without a direct draft into the room.

II. Ceiling, walls, woodwork, and floors.
Ceiling—light in color, surface such as may be cleaned with wall mop.
Walls—light, cheerful, sanitary.
Woodwork—plain, hardwood, with permanent sanitary finish.
Floors—a material which gives ease of tread, does not absorb grease stains, and is durable. Color not so dark that dust shows easily.

III. Kitchen plumbing.
Faucets at convenient height for worker.
Both hot and cold water, score 15.
Just cold water, score 10.
For pipe to carry away waste water, 5.

IV. Furnishings and equipment
(a) Working surface height up to standard. Working surface to the amount of six square feet.
(b) Sufficient and convenient storage space for:
Flour..... 1
Sugar..... 1
Bread..... 1
Cleaning supplies..... 1
Garbage..... 1
Deduct 1 for any item lacking in your kitchen.
(c) A sink at height suited to worker. Two drain boards. Material non-absorbent, such as porcelain, enamel, or marble.

(d) Stoves
1 wood or coal with reservoir..... 1
1 oil stove..... 2
Both in good condition, no parts broken..... 1
(e) Stool
Convenient height for work at table.
Light in weight.
(f) Refrigerator
Commercial or homemade.
Conveniently placed.

V. Arrangement of equipment for food preparation should be such that work proceeds from left to right. Arrangement for dish washing should be such that work proceeds from right to left. Stove, table, water, storage should be within a six-foot radius of each other. Thus, no two pieces are farther than 12 feet apart. In scoring deduct 1 point for every 2 feet in excess of 12 feet.

The filled-in score cards were analyzed and the findings regarding the various items tabulated as in tables 1 to 7, in all of which 100 is taken as the maximum score. It will be observed that only in the case of plumbing and arrangement of equipment were scores returned from all 371 kitchens. The proportion of kitchens included in figures for the other items is indicated in the individual tables.

TABLE 1

Percentages of kitchens receiving various scores for natural and artificial lighting in study of 371 Nebraska kitchens

GEOGRAPHICAL GROUPING	PROPORTION OF 371 KITCHENS INCLUDED IN SCORING	SCORES FOR NATURAL LIGHTING			SCORES FOR ARTIFICIAL LIGHTING		
		100	50 to 100	Less than 50	100	50 to 100	Less than 50
	per cent	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*
All kitchens	92	56	25	11	48	31	13
All town kitchens	92	55	29	8	58	29	5
All farm kitchens	92	56	24	12	47	31	14
Corn belt kitchens	91	55	25	11	46	32	13
Corn belt town kitchens	89	67	22	—	67	11	11
Corn belt farm kitchens	91	55	24	12	46	32	13
Western kitchens	93	58	23	12	50	30	13
Western town kitchens	93	47	33	13	53	40	—
Western farm kitchens	93	59	22	12	50	28	15

TABLE 2

Percentages of kitchens receiving various ratings for screening and for transoms and window boards in study of 371 Nebraska kitchens

GEOGRAPHICAL GROUPING	PROPORTION OF 371 KITCHENS INCLUDED IN SCORING	SCORES FOR SCREENING			RATING FOR TRANSOMS OR WINDOW BOARDS	
		100	70 to 100	Less than 70	Kitchens having one or the other	Kitchens having neither
	per cent	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*
All kitchens	92	68	15	9	40	52
All town kitchens	92	84	8	—	54	38
All farm kitchens	92	67	15	10	39	53
Corn belt kitchens	91	67	15	9	38	53
Corn belt town kitchens	89	89	—	—	11	78
Corn belt farm kitchens	91	66	16	9	39	52
Western kitchens	93	69	14	10	43	50
Western town kitchens	93	80	13	—	80	13
Western farm kitchens	93	67	15	11	38	55

TABLE 3

Percentages of kitchens receiving various scores for sanitation and attractiveness of ceilings, walls, and floors in study of 371 Nebraska kitchens

GEOGRAPHICAL GROUPING	PROPORTION OF 371 KITCHENS INCLUDED IN SCORING	SANITATION					ATTRACTIVENESS				
		100	80	60	40	10 or less	100	80	60	40	20 or less
	per cent	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*
All kitchens	84	53	11	12	5	3	45	11	11	8	9
All town kitchens	83	58	25	0	0	0	54	21	8	0	0
All farm kitchens	84	53	10	12	6	3	44	10	12	8	10
Corn belt kitchens	82	54	7	11	5	5	45	8	11	7	11
Corn belt town kitchens	67	67	0	0	0	0	67	0	0	0	0
Corn belt farm kitchens	82	53	7	12	5	5	44	8	12	7	11
Western kitchens	86[1]	52	17	11	6	0	45[1]	15[1]	12[1]	9[1]	6[1]
Western town kitchens	93	53	40	0	0	7	47	33	13	0	0
Western farm kitchens	86	52	15	12	7	0	44	13	12	10	7

[1] 87 per cent included in scores for attractiveness.

TABLE 4

Percentage of kitchens found equipped with or lacking plumbing in study of 371 Nebraska kitchens

GEOGRAPHICAL GROUPING	SINK, DRAIN, HOT, AND COLD WATER	SOME PLUMBING	NO PLUMBING
	per cent	*per cent*	*per cent*
All kitchens	12	52	36
All town kitchens	29	67	4
All farm kitchens	11	51	38
Corn belt kitchens	10	58	32
Corn belt town kitchens	22	67	11
Corn belt farm kitchens	10	57	33
Western kitchens	14	42	44
Western town kitchens	33	67	0
Western farm kitchens	12	38	50

TABLE 5

Percentages of kitchens receiving various scores for work surfaces and storage space in study of 371 Nebraska kitchens

GEOGRAPHICAL GROUPING	PROPORTION OF 371 KITCHENS INCLUDED IN SCORING	SCORES FOR WORK SURFACES					SCORES FOR STORAGE SPACE				
		100	80	60	40	20 or less	100	80	60	40	20 or less
	per cent	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*
All kitchens	78	54	7	11	4	2	44	16	10	4	4
All town kitchens	75	63	8	0	0	4	50	13	8	0	4
All farm kitchens	79	54	7	12	4	2	43	17	11	5	3
Corn belt kitchens	77	54	8	9	4	2	43	16	10	5	3
Corn belt town kitchens	56[1]	56	0	0	0	0	33[1]	11[1]	11[1]	0[1]	0[1]
Corn belt farm kitchens	78	55	8	9	4	2	43	17	10	5	3
Western kitchens	82	54	5	15	4	4	45	17	11	4	5
Western town kitchens	87	67	13	0	0	7	60	13	7	0	7
Western farm kitchens	81	52	4	18	4	3	43	17	11	5	5

[1] 55 per cent only scored for storage space.

TABLE 6

Percentages of kitchens found equipped with 1 or more stoves, with kitchen stool, and with refrigerator, in study of 371 Nebraska kitchens

GEOGRAPHICAL GROUPING	STOVES				STOOL		REFRIGERATOR	
	Proportion of 371 kitchens included in scoring	2 good stoves	At least 1 good stove	1 poor stove only	Proportion of 371 kitchens included in scoring	Equipped with some form of stool	Proportion of 371 kitchens included in scoring	Equipped with some form of refrigerator
	per cent	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*
All kitchens	78	51	20	7	79	32	79	36
All town kitchens	75	29	38	8	74	45	75	54
All farm kitchens	79	52	19	8	79	30	79	35
Corn belt kitchens	77	52	18	7	76	33	77	41
Corn belt town kitchens	55	33	22	0	55	33	55	44
Corn belt farm kitchens	77	53	18	6	77	33	77	41
Western kitchens	82	49	24	9	86	30	83	27
Western town kitchens	87	60	27	0	87	54	87	60
Western farm kitchens	81	52	20	9	85	26	83	23

TABLE 7

Percentages of kitchens receiving various scores for arrangement of equipment in study of 371 Nebraska kitchens

GEOGRAPHICAL GROUPING	SCORES				
	100	75 to 100	50 to 75	25 to 50	Less than 25
	per cent	*per cent*	*per cent*	*per cent*	*per cent*
All kitchens	44	29	23	2	2
All town kitchens	66	17	17	0	0
All farm kitchens	42	31	23	2	2
Corn belt kitchens	45	28	25	1	1
Corn belt town kitchens	67	22	11	0	0
Corn belt farm kitchens	44	28	26	1	1
Western kitchens	44	33	17	3	3
Western town kitchens	67	23	20	0	0
Western farm kitchens	41	38	17	3	3

TABLE 8

Percentages of kitchens receiving various total scores in study of 371 Nebraska kitchens

GEOGRAPHICAL GROUPING	SCORES							
	90 to 100	80 to 90	70 to 80	60 to 70	50 to 60	40 to 50	30 to 40	20 to 30
	per cent	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*
All kitchens	12	16	16	21	18	11	5	1
All town kitchens	42	38	8	4	4	0	4	0
All farm kitchens	9	15	17	22	19	12	5	1
Corn belt kitchens	12	16	16	25	16	10	4	1
Corn belt town kitchens	45	33	11	10	0	0	11	0
Corn belt farm kitchens	10	15	17	26	17	10	4	1
Western kitchens	12	18	17	13	20	13	5	2
Western town kitchens	40	40	7	7	6	0	0	0
Western farm kitchens	9	14	18	14	22	14	6	3

Table 9 shows how the kitchens in the town, corn belt farm, and western farm areas compare in respect to the various items and also in total scores.

TABLE 9

Comparative ratings given to town, corn belt farm, and western farm kitchens in study of 371 Nebraska kitchens

ITEM	TOWN KITCHENS	CORN BELT FARM KITCHENS	WESTERN FARM KITCHENS
Natural lighting	Medium	Lowest	Highest
Artificial lighting	Highest	Lowest	Medium
Screening	Highest	Medium	Lowest
Transoms and window boards	Highest	Medium	Lowest
Ceilings, walls, and floors:			
Sanitation	Highest	Lowest	Medium
Attractiveness	Highest	Lowest	Medium
Plumbing	Highest	Medium	Lowest
Work surfaces	Highest	Medium	Lowest
Storage space	Highest	Medium	Lowest
Stoves	Lowest	Highest	Medium
Stool	Highest	Medium	Lowest
Refrigerator	Highest	Medium	Lowest
Arrangement of equipment	Highest	Medium	Lowest
Total score	Highest	Medium	Lowest

TABLE 10

Percentages of farm kitchens receiving a score of 100 for various items in study of 371 Nebraska kitchens

ITEM	PERCENTAGE BASED ON ALL SCORES REPORTED	PERCENTAGE BASED ON PERFECT, ITEMIZED SCORES
Screening	67	72
Natural lighting	56	61
Work surface	54	68
Stoves[1]	52	66
Sanitation of ceilings, walls, and floors	53	63
Artificial lighting	47	51
Attractiveness of ceilings, walls, and floors	44	52
Storage space	43	54
Arrangement of equipment	42	42
Transom or window board	39	42
Refrigerator[2]	35	44
Stool[3]	30	38
Plumbing[4]	11	11

[1] Two good stoves in good condition.

[2] Some kind of refrigerator, in some cases not wholly satisfactory.

[3] Some kind of kitchen stool, in most cases not wholly satisfactory.

[4] Sink, drain, and hot and cold water.

Table 10 presents the percentages of farm kitchens which were scored 100 for the various items. In the first column are given the percentages which were reported with scores of 100. In the second column the figures given are the percentages corrected for kitchens which did not report the item in question, on the assumption that the distribution of scores would be the same in the kitchens unscored as to this item as in those for which a score was given. As will be seen on the score-card reproduced on page 504, screening is one of four items under light and ventilation, with a maximum score of 7 points assigned to it among the 20 points assigned in all to light and ventilation. When a card was returned with light and ventilation scored less than 20, but without individual scores assigned to the four items under it, it was impossible to determine what proportion of the lowered value was to be assigned to screening. Assuming that the proportion of kitchens with screens which should be rated at 100 is the same among the 8 per cent whose score is lacking or not clear as among those on which it is accurately given (namely, 67 per cent), we find that 72 per cent of farm kitchens should be thus scored. This assumption is probably not entirely correct

because a perfect score is more likely to be set down than a poor one. Some such assumption, however, seems necessary because the proportion of incomplete returns from the various kitchens varies from none on some items to 21 per cent in others. A comparison of the two sets of figures shows that the relative position of the various items in the list is not greatly changed by the method of correction.

Discussion. This score card is not complete. It covers, however, the most important points in the general structure of the kitchen and the larger articles of equipment, while the total score gives a general idea of kitchen convenience as measured by our present standards. The analysis of the score cards indicates that structural faults which handicap the housewife in many kitchens might be precluded in new buildings, and that several of the most common faults could be corrected by the housewife without much effort. The large number of faults due to lack of forethought indicates that architects, builders, and housewives alike need enlightenment as to those factors of convenience which may be introduced without cost by proper planning.

The fact that the small town kitchens score higher than farm kitchens in every respect but one shows the need of raising rural housing standards. The only point on which the town kitchens ranked lower than the farm kitchens, namely, in the number of stoves, is insignificant because many town kitchens are heated by furnace in winter and kerosene, gas, or electricity is used for cooking throughout the year, so that there is no use for a second kitchen stove.

Western farm kitchens rank higher than corn belt farm kitchens in only four items: natural lighting, artificial lighting, sanitation, and attractiveness of walls, ceiling, and floors. Part of their superiority as to lighting may be due to the better conditions of the walls and floors.

Since this study was made, another score card has been worked out to present more definite standards and to yield more exact information about kitchens. It is felt that further studies are needed to determine desirable requirements for such matters as kinds and amount of storage space, placing of windows, and arrangement of furnishings, as well as for studies of equipment and its suitability to special requirements.

EDITORIAL

The Asheville Meeting. No striking changes in the organization or policies of the American Home Economics Association were reported at the 1927 annual meeting, and the attendance was not so large as at Minneapolis in 1926. Nevertheless, the year's round-up of the members and the business of the American Home Economics Association have strengthened the impression of slow, steady development. The proceedings which will go to all members in the October *Bulletin* will tell the details of the business sessions, while the October JOURNAL will carry papers and abstracts from the general and sectional programs. Meanwhile a few conspicuous facts may be of interest to those who were not on the scene.

The membership of the Association was practically the same as reported at Minneapolis in 1926. Financially the Association again has a small surplus at its disposition. The officers were reelected for another year, save in the case of one vice-president who had already served the customary three years, and in whose place Margaret Sawyer was elected Other new members of the executive committee are Jessie Harris, Mrs. Mildred Weigley Wood, and Mabel V. Campbell.

The committee on the economic and social problems of the home petitioned the council to be made a section, a request unanimously granted. The executive committee was authorized to appoint two significant committees, one to consider the advisability of reorganizing and renaming the sections and developing a logical classification of their work, and the other to revise the Syllabus of Home Economics which was published in 1913 as the initial publication of the Ellen H. Richards Memorial Fund and which has been for some years out of print, and also out of date.

To provide place in the JOURNAL OF HOME ECONOMICS for the publication of some of the suitable technical papers resulting from the increased research in home economics, without lessening the amount of space available for articles of wider interest, part of the surplus was appropriated to defray the expense of adding to the magazine for one trial year a new department devoted to the reports of scientific or technical home economics research.

The field worker in child development and parental education made the gratifying announcement that the Laura Spelman Rockefeller Memorial has made a four-year grant to establish a cooperative child study center in Washington, D. C., the joint direction of which will be in the hands of various federal and national private agencies, including the American Home Economics Association, and that the Memorial has designated the American Home Economics Association as the organization through which the funds are to be dispersed.

Two international conferences, one to be held in Rome next November (see below), and the International Conference of Social Work called to meet in Paris in July, 1928, were brought to the attention of the Association and committees were appointed to give the requested cooperation.

International Congress of Home Economics Instruction. Announcements reached this country in June that the Fourth Congress of Home Economics Instruction was to meet in Rome, November 14 to 16, 1927. The International Federation of Home Economics Instruction, which maintains a permanent office at Fribourg, Switzerland, and which has sponsored the four preceding congresses (see JOURNAL OF HOME ECONOMICS, volume 16, 1927, pages 385 and 442) has entrusted to an Italian Committee the task of organizing the present one, which is under the distinguished patronage of the Queen of Italy and Premier Mussolini. The chairman of the committee is A. Turati, the secretary-general Dr. Maria Diez Gasca; their headquarters have been established in the Roman offices of Dopolavoro Feminile, a well-known welfare organization.

The organizing committee asks that in each country included in the congress a committee be established to aid in assembling material for the program, in preparing and sending exhibits, and in arranging for an adequate delegation. The American Home Economics Association is cooperating in the work in the United States.

The first thing to do was to assemble material for the program. As is customary in such international congresses, the working sessions are to be given over largely to discussions of set topics, on which information has been collected well in advance from the cooperating national committees, summarized by so-called *rapporteurs*, translated into the official languages of the conference, and distributed to prospective members before the congress opens. So much time must be allowed for this procedure that material was due in Rome only a few weeks after the announcements of the congress reached the United States. Ruth Van Deman and the editor of the JOURNAL were requested to undertake the

collection of material on the eleven topics on the program—a difficult task in the time allowed. It was only because the specialists whom they drafted into service let this have precedence over their other work that even a fairly representative picture of the American situation could be sent to Rome on such short notice.

A representative delegation of American home economists is much to be desired at Rome. Any who are to be in Europe at that time or who know of suitable friends who are to be there are urgently requested to communicate at once with the editor of the JOURNAL OF HOME ECONOMICS, 617 Mills Building, Washington, D. C.

Foreign Positions for Home Economists. The International Committee had many interesting things to report at Asheville, among them the demand for several suitable young women to organize pioneer work in home economics in distant parts of the world. Perhaps the most urgent call is from South Africa, where the American Board of Foreign Missions needs two home economists of the highest training and proved administrative ability as heads of home economics departments in its schools at Inanda and Adams. Another interesting position is at the Uduvil Girls' School in Ceylon, a hundred-year-old institution, some of whose graduates have taken degrees in American colleges, and which is searching for some one who can take the responsibility of workng out policies and methods in the home economics department. For all three of these positions women between twenty-five and thirty years old are preferred, as mature enough to carry the responsibility and still young enough to make the necessary adjustment to conditions so unlike our own. It is true that salaries in such positions are not large, but the work appeals to the sense of adventure and idealism and offers a challenge to any keen young home economist to test out her personal ability and the value of her training under conditions which give her exceptional opportunity to enlarge her own horizon while introducing her professional point of view where there is a genuine demand for it.

Either the chairman of the International Committee, Mrs. B. G. Demarest, One Lloyd Road, Montclair, New Jersey, or Mrs. Ruby Phillips Birge of the candidate department of the American Board of Commissioners for Foreign Missions, 14 Beacon Street, Boston, Massachusetts, will be glad to correspond with possible candidates, and Mrs. Demarest asks heads of home economics departments to bring the positions to the attention of suitable graduates.

The National Conference of Social Work. The National Conference of Social Work held its fifty-fourth annual meeting at Des Moines, Iowa, May 11–18, with over three thousand in attendance. The American Home Economics Association was officially represented by Emma A. Winslow, of the Child Health Demonstration Committee, to whom we are further indebted for the information regarding its home economics aspects.

While a considerable proportion of the formal papers dealt primarily with the technical aspects of social work, there was much of direct interest to the home economist. Many of the research studies reported related closely to problems being studied in home economics. At meetings of the conference divisions on the family, children, and mental hygiene, there was frequent consideration of methods of securing better adjustments in personal and family life, and much valuable material was also included in the programs of the other divisions, especially those on health, industrial and economic problems, neighborhood and community life, the immigrant, and the newly-organized one on educational publicity. Subjects of interest to the home economist were also discussed at meetings of the many kindred groups held at the same time as the National Conference, and there was a plentiful and varied fare throughout the week from which selection could be made with reference to her special needs.

Three meetings of the home economics group were held for the discussion of home economics problems, a luncheon meeting and a round-table conference on May 13 and a joint session with the Family Division on May 17.

Budgets was the subject for discussion at the round-table conference at which Dr. Emma Winslow presided. Professor Elizabeth E. Hoyt of Iowa State College spoke on Methods of study of standards of living, and reports were presented from the budget committees in New York, Cleveland, Detroit, St. Louis, Des Moines, Milwaukee, and other cities, where work has been done during the past year in connection with the home economics group and under the special leadership of Mrs. Chase Going Woodhouse of the U. S. Department of Agriculture.

At the joint session with the Family Division Miss Helen W. Hanchette of the Cleveland Associated Charities presided. Emotional factors in nutrition work with children was the topic given special consideration, with Dr. George J. Mohr of the Chicago Institute for Juvenile Research as the main speaker, and Grace F. Marcus of the National Committee for Mental Hygiene discussing the subject from the point of view of the

mental hygienist and Florence Nesbitt of the Chicago United Charities from the point of view of both the case worker and the home economist.

The luncheon meeting, presided over by the chairman, Luise Kraus of the New York Charity Organization Society, was the annual meeting for the group. Officers chosen for the coming year were as follows: chairman, Hilda Sheppard, Cleveland Associated Charities; assistant chairman, Luise Kraus, New York Charity Organization Society; secretary-treasurer, Marcia Ward, Detroit Visiting Housekeeper Association. In addition to its work with local budget committees in securing uniformity in budget standards, the group is planning to organize a special study of the function of home economists in social service agencies. Arrangements are to be made by the group for home economics programs at next year's National Conference of Social Work in Memphis, and to assist in the preparation of the special report on household management in the United States, requested for presentation at the International Conference of Social Work in Paris next July (see page 513).

Grace Schermerhorn Scholarship. The Association of Home Economics Teachers of the New York City Elementary Schools has established the "Grace Schermerhorn Scholarship" at the College of Home Economics at Cornell University. This is a memorial to the former director of homemaking in the New York City Schools. Miss Delight McAlpine, who was graduated from Curtis High School, Staten Island, in June, has received the first award and will enter college this fall.

The funds for the scholarship have been raised by gifts from the members of the Association.

Anna U. Shepard, president for the past two years, Helen Chamberlain, treasurer, and Lillian Caplan, chairman of the committee which raised the fund, wish to express their appreciation of the generous cooperation which has resulted in the "Grace Schermerhorn Scholarship."

Texas Appropriations for Home Economics. Just before the adjournment of the Texas legislature in 1925, Governor Ferguson, it will be remembered, unexpectedly vetoed the bill appropriating $145,000 of state funds for vocational home economics. As explained editorially in the JOURNAL for August, 1925, this meant that the only money available for such work in Texas public schools during the biennium 1926–27 was the $16,848 of federal money available under the Smith-Hughes Act. As a result progress was not only retarded but stopped except for

such work as could be carried on with the scanty federal funds in the vocational schools which met the Smith-Hughes requirements.

It is gratifying to report that the situation has now changed. Of the $624,818 appropriation from state funds for vocational education during the biennium 1927–29 which was passed by the legislature during this year's session and approved by Governor Moody on June 18, one-half has been allotted to home economics. This, with the federal appropriation of $16,848, means over $150,000 a year for vocational home economics in Texas. Though the appropriation was made too late for all interested schools to take advantage of it this year, many new home economics departments are to be installed in 1927 and rapid progress is expected.

It is planned to use the federal funds largely for developing a program of adult education—a work which had been growing rapidly and successfully before the setback due to Governor Ferguson's sudden veto.

American Home Economics Association and Student Club Pins. The American Home Economics Association and student club pins which the committee on seal and pin was authorized to provide may now be purchased from the executive secretary, Miss Alice L. Edwards, 617 Mills Building, Washington, D. C. The same design is used in both—the Betty lamp in a circular border similar to that used on the cover of the JOURNAL. The pin for Association members is rolled gold with the words "American Home Economics Association" in a band of dark blue enamel and sells for $1.50. The one intended for the use of student clubs is in bronze with the lamp and lettering in good relief and sells for 75 cents.

OPEN FORUM

Textile Standardization: An S. O. S. from the Textile Section. The Textile Section has been quietly at work on its standardization program since it was first announced in 1919. This year the movement has reached a critical point. A strong, vigorous push will carry us to the goal. Indifferent support will mean many more years of patient effort. This is an appeal to each individual member of the American Home Economics Association to give her help to one of the most far-reaching and worth-while things a section has ever tried to accomplish.

It will be remembered that as a result of a conference held at the Blue Ridge meeting of the Association in June, 1919, the Section organized a central committee to be known as the Standardization Committee, with a large advisory committee to assist them. The report of Miriam Birdseye,[1] first chairman of that committee, contains the resolutions passed by the section at that conference and outlines the plans. One of the resolutions reads as follows:

> And Whereas, we believe that a large percentage of American women are ready today to create and maintain a market for textile fabrics conforming to reasonable standards and know that we can readily reach these women and others through the various types of home economics teaching in which our members are engaged: be it
>
> Resolved, That this association invite the coöperation of associations of manufacturers, jobbers, and retailers in determining such standards and in putting on the market a limited number of standardized fabrics of various grades on which is placed some identifying symbol to signify such standardization.

This was the beginning of a movement which, as was fully anticipated by these pioneers, was to grow very slowly and produce tangible results only after many years of effort. Their ambition was that at some future day every woman who purchased a textile fabric could specify the grade of material she was willing and able to pay for and could be assured that the piece offered her came up to certain minimum standards for that grade. As was pointed out, this would be a kind of insurance that the fabric had the definite qualities which she desired in that particular material. The grade she chose might not be the highest purchasable.

[1] Some Suggestions from the Textile Section. *J. Home Econ.* **11**, 388 (1919).

For the purpose she had in mind, the highest qualities of durability might not be necessary. But she would know that she had received what she purchased, a fabric conforming to the standards she demanded.

This goal has not yet been reached, but the idea has grown and developed momentum as all worth-while ideas do. Help has come from many sources. Grade and high school teachers have assigned the topic to their classes for study and for themes. College instructors have included it in their textile courses; graduate theses have developed from the many research problems which it has brought to light and extension classes and clubs have found it a stimulating subject for discussion.

Each year a standardization committee of the section has gone ahead trying in various ways to stimulate interest, set up standards, and gain the cooperation of manufacturers and merchants. Conferences have been held with many individuals and groups and cooperative studies on the durability of various fabrics have been organized under the direction of members of the committee. Recently the section has grown sufficiently and gained enough financial support to enable them to finance a fellowship. This has permitted a more intensive study of standards and under the direction of Dr. Rachel Edgar, chairman of the committee, detailed analyses have been made of over a hundred grades of sheeting with the idea of developing the minimum standards for each grade. This fellowship is being continued.

At the same time Rosamond Cook, a former chairman of the committee, has been developing another phase of the work. She has been able to show experimentally how very unreliable are all the so-called simple tests by which women consumers, sales people, and even home economics students have been taught to judge the fabrics offered to them on the retail counter.[2] The data collected have been so startling that the need for standardization has been brought home more forcibly than ever to textile teachers and homemakers. As a direct outcome of a report of these studies given before a group of representatives of the sheeting industry, the American Home Economics Association, the General Federation of Women's Clubs, government laboratories, and many other consumers' agencies, a request for help is being made to the American Engineering Standards Committee, an organization which for a number of years has been assisting in the standardization of other types of commodities. They have signified their willingness to take up the subject if formally petitioned by a consumer group. This petition is going to

[2] How Can Our Method of Buying Textiles Be Made Reliable? *J. Home Econ.* **19**, 33 (1927).

them from the Textile Section and other organizations, but it must have the support of large groups of women if it is to bring results.

The Section now particularly needs the interest and hearty backing of every woman who desires a more logical and reliable system of fabric retailing for herself and for all women consumers. Will every reader interested write to Rosamond Cook, University of Cincinnati, Cincinnati, Ohio, or to officers of the Section for facts by which to get herself well informed and then talk and teach textile standardization intensively during the next few months? The cause is worthy of the support of every member of the Association. Your help is needed.

RUTH O'BRIEN,
U. S. Bureau of Home Economics.

Individual Problems for the Clothing Course. The fact that pupils in our clothing courses differ in skill, rate of work, and previous experience, makes it difficult to arrange the work so that each girl shall have opportunity to progress as rapidly as she is capable of doing. The plan here described was developed in the hope of meeting this difficulty. Another point kept in mind was that girls dislike making garments exactly like those of their classmates as much as they dislike having others wear garments similar to their own. The method deals only with laboratory work; theory and general processes are taught to the whole class as usual.

If the teacher has no means of judging the ability of the different girls at the beginning of the course, it is sometimes necessary totestthis out by having the whole class work out the first problem, but as soon as it is possible to estimate what she can do, each girl is asked to work out a problem of her own, the essential feature of it being that it shall involve some new principle, such as new steps in construction. A record of the time spent on each article is kept on a card which is punched at the close of each laboratory period or half period. For the latter a punch which gives half punches is helpful, as its use makes it easier to indicate when the girl devotes part of her laboratory work to study or something else not connected with actual construction work.

Each finished article is judged by means of a set of scores worked out by the classes themselves. The last score-card used read as follows:

1. Suitability..... 10
   a. Pattern
   b. Cost
   c. Material

2. Method of work..... 25
   a. Correct use of tools
   b. Good posture
   c. Neatness
   d. Directions followed
   e. Thought shown
3. Rate of work..... 10
4. Construction..... 25
5. Finished product (appearance)..... 15
6. Improvement shown..... 15

100

In judging the worth of any plan it is well to consider its advantages and disadvantages as it really works out. This particular plan has shown the following advantages:

1. Each pupil works at her normal rate of speed on some needed article. Knowing upon what basis she is to be graded and having a separate problem, she is not tempted to slight any process in construction in order to keep up with some faster pupil.

2. Each pupil receives personal supervision.

3. Nearly every girl has a feeling of satisfaction in the finished product and is proud of the admiration of the other girls.

4. By seeing more than one method of making an article the girls learn to exercise choice in their later work.

5. A girl is not compelled to buy something she cannot afford or for which she has no use. The pupils often make garments for other members of the family or for teachers.

6. In the case of a rural community where it is almost impossible for the pupils to bring samples and have the teacher approve the material, the suitability and price of materials under consideration can be discussed with the teacher, and if the pupil finally selects unsuitable material her error in judgment will be seen on her score-card.

The only apparent disadvantage of this method, if it could be considered such, is that the teacher is busier with so many different problems to keep in mind. The girls seem to get help whenever they need it as well as when the whole class works on the same problem. Moreover, the girls learn to plan their work, so that they can find something else to do in case the needed help for a certain point can not be given to them immediately.

The writer's experience is that the classes in which this method has

been used have made the best progress, have been the most interested, and have been the most enjoyable to teach—results which more than compensate for the extra work.

MARJORIE MILLER,
Hudson, Iowa.

A Home Score Card from Iowa. The Iowa Council of Citizenship, appointed by Governor Kendall in 1924, requested that a score card be formulated for rating homes in the state, and the one herewith shown was accordingly prepared. It has been used by the Department of the American Home of the State Federation of Women's Clubs and by members of both the resident and the extension staffs of Iowa State College.

A HOME SCORE CARD

The following score card is suggested as one which will enable the family members themselves to check on their own home. It will be of value in showing the strong points as well as the weaker ones, and will be especially helpful if used at intervals as a check on improvements which can be made by the family members working together. It is not intended to serve as a basis for gathering statistical data, but merely as an incentive to the maintenance of successful homes.

	FAMILY SCORE
I. The House, Grounds, and Equipment.....100	
A. Is the house adequate.....50	
1. For sleeping—*10*.....	
a. Number of people to a room.....	
(a) If one—5.....	
(b) If two—4.....	
(c) If more than two—2.....	
b. Is there cross ventilation in each room—*5*.....	
2. For Bathing—*10*.....	
a. Is there hot and cold running water—4.....	
b. Is there proper sewage disposal—3.....	
c. Is there sufficient heat—3.....	
3. For working—*10*.....	
a. Does the house have sufficient equipment which is of the right type and well-arranged for:	
(a) Food preparation and service—2.....	
(b) Laundering—2.....	
(c) Cleaning—2.....	
(d) Child Care—2.....	
b. Is there sufficient light, natural and artificial—2.....	
4. For living—*10*.....	
Is there a warm, well-lighted room which permits and encourages group relationships?	

FAMILY SCORE

5. Storing—*10*.....
   a. Are there satisfactory places for storing?
      (a) Clothing—2.....
      (b) Household linens—2.....
      (c) Foods—2.....
      (d) Cleaning Equipment and supplies—2.....
      (e) Fuel—2.....
B. Is the house in good condition.....20
   1. Exterior (Paint, shingles, screens, etc)—*10*.....
   2. Interior (Walls, floors, woodwork, plumbing)—*10*.....
C. Are the grounds.....20
   1. Well drained—7.....
   2. Sufficiently large for children's play space—7.....
   3. Attractive—6.....
      (Shrubbery)
      (Upkeep)
D. Is there an adequate supply of pure water.....10.....
Total

II. Physical Well-Being of Family Members.....100
A. Is each member
   1. Of normal weight—*15*.....
   2. Free from ailments—*15*.....
      (cold, headache, constipation, etc.)
   3. Able to carry a normal load easily—*15*.....
B. Have there been any serious illnesses during the year—*15* (if none)
C. Do periodic examinations by doctor and dentist indicate physical well-being—*40*.....
Total

III. Management.....100
A. Of family income.....50
   1. Is the family living within its income—*10*.....
   2. Are there classified records of expenditures kept as a guide to future expenditures—*10*.....
   3. Is there a definite plan—with personal allowance for spending. Has the plan been made by all members of the family working together—*10*.....
   4. Do all members cooperate in carrying out the plan—*10*.....
   5. Are there regular and systematic savings—*10*.....
B. Of time.....50
   1. Are the tasks of the home evenly distributed throughout the week and year—*20*.....
   2. Do all family members have meals regularly—*10*.....
   3. Do all family members have rest regularly and in sufficient quantity—*10*.....
   4. Do all family members have recreation regularly—*10*.....
Total

	FAMILY SCORE
IV. Group Relationships and Development.....100	
A. Do all members of the family have at least one meal together daily.....15	
B. Does the family celebrate birthdays, holidays and other special occasions as a group.....15	
C. Is every member interested in the activities of every other member of the group.....15	
D. Do all share in carrying on the work of the home.....15	
E. Do the home associations and opportunities stimulate each member mentally, morally, aesthetically and spiritually 40	
Total	
V. Contribution to Community.....100	
A. Do the individuals of the family hold membership in and participate in.....50	
1. Church activities—*10*.....	
2. Educational activities—*10*.....	
3. Civic organizations—*10*.....	
4. Social organizations—*10*.....	
5. Professional organizations—*10*.....	
B. Is the family interested in state, national and international affairs.....50	
Total	
Grand Total.....500	

AVIS TALCOTT
RUTH M. LINDQUIST,
Iowa State College, Ames.

A Home Economics Magazine from Finland. It is very interesting and, I think, useful to know what the home economics people and homemakers are doing in different countries. This is most easily accomplished through the home economics magazines. On my desk at present are a few copies of one from Finland. Its name is *Kotiliesi*, which means "Home Fireplace." It is published twice a month in Helsingfors, and is 32 pages long. On its first page it carries the slogan: "Home is The Heart of the Community."

The magazine is addressed to the homemakers and contains practical articles on textiles and clothing, home furnishing and decorations, foods and nutrition, family health, child care and training, and home economics education. A few short stories and novels of home life add to the general interest of the magazine, as do illustrations from photographs and pictures from the hands of the best painters. Very interesting is the pattern plate of *Kotiliesi*, which gives the patterns of garments and

designs for textile handiwork, weaving, or embroidery. Each issue contains many questions from readers and the answers to these questions.

The number for February 15, 1927, prints the entrance requirements for students at the Finland State Home Economics Teacher Training Institute, which is expected to open in January, 1928. They are:

1. At least 20 years of age.
2. Certificate from physician that the applicant is in good health and free from disease.
3. Certificate that the applicant has finished high school or has corresponding knowledge.
4. Experience: For applicants to the homemaking Division is required one year's experience in supervised housekeeping; for applicants to gardening division two summers' actual experience in gardening.

Kotiliesi is edited by a committee of five women. At the head of the committee is Mrs. Hedvig Gebhard, the wife of Professor Gebhard. Mrs. Gebhard is also a member of the Finland Parliament and has been for many years an energetic leader not only in the field of home economics but also in the cooperative movement and in social life to which she has made contributions well known throughout the country.

The magazine is published on the first and fifteenth of every month. The subscription is 40.S marks, which is approximately $1.25 per year. The editorial address is: Kotiliesien Toimisto, Helsinki, Ft. Teatterikyan 3 B, Finland.

MRS. ALMA MARTIN,
Graduate student from Esthonia,
Iowa State College, Ames.

Parental Education at Cornell. Pre-parental and parental education have been a part of the curriculum of the New York State College of Home Economics, Cornell University, since 1924.[1] Five courses in the department of family life, with a nursery school as the laboratory for child study, and several courses in cooperating departments constitute the pre-parental work. Lectures and conferences are offered for parents of children registered in the nursery school, and for other parental groups in the state an extension specialist in child training holds institutes, lectures, and conferences.

[1] See "The Nursery School in the Home Economics Curriculum," by Helen Monsch. JOURNAL OF HOME ECONOMICS, November, 1925.

Resident instruction begins with elementary child training, for which psychology is a prerequisite. The course includes the care and management of young children as well as the relation of the physiological rhythms to habit training and to character building, and covers the mental hygiene of childhood, especially the emotional life of the child. A second course, advanced problems in child training, takes up the mental hygiene of childhood and particularly the emotional life of the child. For graduate students a seminar in experimental child training offers an opportunity to work out research problems in parent-child relations.

Nursery-school technique deals with the equipment of the nursery school, together with stories, games, music, and methods of managing little children. Child hygiene teaches the factors making for positive health and the common diseases, physical defects, and disturbances which should have medical attention.

The department of clothing offers a course in clothing, applying the principles of design and construction to healthful, simple, and becoming garments for children of different ages. Habit training is not overlooked. Fastenings and openings are planned for little fingers, short arms, and the early steps in learning to dress and undress. A class in nutrition of children in the department of foods and nutrition is required of all students in home economics. Opportunities are given for practice in feeding infants, preschool, and school children in homes and public schools and in the nursery school. The department of rural education in the state college of agriculture gives two courses in psychology especially for students in child training.

The parents of the nursery school pupils form a Parent's Club which meets monthly for lectures comparable to those given in the elementary child training course. They also come twice monthly for personal conferences with the instructors. The meetings are for both fathers and mothers and it is interesting to report that the fathers come.

The extension program in parental education includes four- and five-day county institutes, the formation of child study groups, and monthly meetings following up the institutes. Although these are held under the auspices of the county or city home bureau, other health and welfare agencies and parent-teacher associations cooperate and the lectures are open to the public.

At each institute there are four or five lectures on such topics as obedience and punishment, fears of childhood and their treatment, habit

formation, and motivation of conduct, with demonstrations of stories, games, music, and toys for children, and books for both parents and children. Children of the parents attending are used in the demonstrations. Local firms lend material for exhibits and demonstrations. The parents may confer with the specialist on problems, which are followed up later.

The monthly follow-up meetings take up such subjects as teasing, quarreling, and temper tantrums, jealousies and the love-life of the child, mental hygiene principles, and training for home and social responsibility, with lecture-demonstrations on food and clothing for young children.

At both the institute and follow-up meetings the children who accompany their parents are cared for in a separate room so that the mothers may enjoy the sessions undisturbed while the children are happily at play. Responsible persons are in charge and local nurses inspect the children as they are admitted to prevent the spread of disease.

The demand for the extension work in child training is more than can be met by one worker but it is believed better to do intensive work in a few counties than to give a smattering of the subject in many places.

GERTRUDE MATHEWSON,
Cornell University, Ithaca, New York.

BOOKS AND PERIODICALS

The Home-Maker and Her Job. By LILLIAN M. GILBRETH. New York: D. Appleton and Company, 1927, pp. 155. $1.75.

"The efficient manager in industry and the housekeeper in her more restricted job of planning, operating, and maintaining an adequate mechanism, must be to some extent a psychologist and an engineer. As a psychologist she will study the people with whom she will work in the home. As an engineer she will determine how to use both these people and the material resoures at her command in the most efficient manner."

The application of scientific management to the business of homemaking is one method for eliminating waste in our homes. An efficiently managed home must be established upon "a basis of convenience, not convention." Its activities must be charted to include the ambitions of all members of the household. The application of these ideas must take into consideration that each member of the household is a producer as well as a consumer.

According to Mrs. Gilbreth this application of industrial principles will establish "the one best way" to accomplish each household process. An ideal plan for arriving at the "one best way" takes into consideration: 1. A practical working basis which may be applied generally, or finding the best method without changing the worker. 2. A basis which is more theoretical, or finding the ideal method if one could change the worker.

Job analyses, standardization of tasks, motion, and fatigue study should act as stepping stones to the "one best way." These may create an "appetite for the job" and result in a well-balanced twenty-four hour day which will give the greatest number of "happiness minutes" for all members of the household. However, in dealing with human beings it must be remembered that "standardization should never be enforced if it offends the aesthetic taste or a feeling of individuality. . . . . One must be conscious of what the lack of it costs."

The definite suggestions for transplanting into the home such industrial tools as "process charts," "reminder files," and "calendar plans" are highly suggestive. The recommendations for using cyclegraphs and micro-motion films to facilitate motion study in the home, and simo-charts for recording skills, offer a specific method worthy of consideration.

Whether some of the methods which the author found to work so well in the home where there were eleven children are applicable to the average American family of three or four is a question.

The book is a decided contribution to the field of home economics literature and is thought-inspiring. Since most home economists are not trained in engineering it would be helpful to have more definite applications of the industrial methods to one or more simple processes found in every home. This would serve as a working basis by illustrating specifically how processes may be analyzed and improved and how principles may be set down as a result of this improvement which could be applied under similar conditions elsewhere.

ELOISE DAVISON,
Iowa State College, Ames.

What's Wrong With American Education? By DAVID SNEDDEN. Philadelphia: J. B. Lippincott Company, 1927, pp. 379. $2.00.

One reads "What's Wrong With American Education?" with ever-increasing interest. The author stimulates to argumentative as well as to constructive thinking. There is no question that there is truth in many of the statements in regard to the weaknesses and faults of our educational system, but

one waits for constructive suggestions as to how to treat the diseases now that they have been diagnosed.

The topics are in the form of questions and then in a paragraph or page the thought or discussion is developed. The conclusion reached is that almost everything is wrong but that American education, while weaker in spots, is not more faulty than that of Europe.

There are two groups of thinking people who criticize the American system of education, the professional educator and the layman. The author is inclined to give greater weight to the criticisms of the laity. There are few educators who are sufficiently well trained and broad minded to establish adequate educational policies. Many of the most able educators are specialists and well prepared to advocate the extension of their own line of interest but are not capable of viewing the sum total of essential educational materials.

While discarding many of the criticisms of others, the author makes the following summary:

"The kindergartens have not discovered ways of coordinating their offerings with the effects of household education; the elementary school curricula are congested with ill-assorted and ineffectively coordinated objectives; curricula and methods are ill-adapted to those of less than median intelligence; high school education designed to serve the ends of liberal education is not so serving; liberal colleges have not developed objectives suited to the twentieth century, and present type of vocational education is un-democratic."

"Can people be taught 'to think'?"

"Are all of equal 'educabilities'?"

"Have we, in any considerable degree, a science of education?"

"How shall we relate education to learning?"

These are a few of the many interesting questions propounded in the earlier part of the book.

Cognizance is given by the author of the "extra-school educational agencies" versus neighborhood, market place, religious influence, coterie and club, police power, work-place, and self-education.

With regret one agrees with such statements as the following: "Especially for boys between ten and fifteen years of age does the modern urban home cease to be an agency of sound education through domestic participation."

"Many doubts are still widely held as to whether, under present-day conditions, religious education actually functions in the form of superior moral behaviors."

"Except under rare conditions, the approval or disapproval of the mass membership of such a coterie group becomes far more potent than urged standards of elders outside the gang-like group."

One of the most delightful parts of the book is that which relates to the education of young children and develops the line of thought that home conditions and environment should determine the hours of required school attendance—from three to ten, or to state, as are hours of labor stated, from 15 to 60 hours per week, the latter perhaps for eleven or twelve months. Just how that type of school administration could be secured where some 200,000 children are to be cared for is not stated, nor is the greatly added cost discussed, nor the resentment of parents whose child goes less or more to school than do the other children.

It is because the author stops when he has stated "wrongs" and proposed "rights" and does not suggest machinery by which the remedies may be applied that the reader remains unsatisfied.

Almost everything is wrong with American education and yet the author barely suggests the need of disintegrating the ideas regarding "American" education into areas of dense and sparse population, into American parentage and foreign home environments, into varying areas of climatic conditions, into financial pressure stratifications.

Perhaps the greatest confusion in regard to "American" education is due to the determination that it shall be an "all-American" type. Shall it be accepted that matter, method, and motives must be alike in rural Georgia and in Little Italy;

in foreign Massachusetts and American Oregon; where the Iron Man prospers in Michigan, the demon Coal commands in West Virginia, and the cotton mills whirl in the Carolinas? Is it possible that what is wrong with American education is that there is need of less discussion concerning major operations and a prolonged period of local treatments?

Perhaps as the author suggests, we need to stop discussing education and begin to consider educations.

Home economics is dismissed with the damnation of scant praise.

HENRIETTA W. CALVIN,
Philadelphia, Pennsylvania.

A Survey of Public School Courses in Child Care for Girls. L. M. CRABBS and M. L. MILLER. Detroit, Michigan: Merrill-Palmer School, 1927, pp. 96. 25 cents.

This survey claims neither to be exhaustive nor to evaluate the work in child care given in the public schools, but to indicate its present status and trends by summarizing data brought together from widely scattered sources. The study naturally falls into "(1) Consideration of the need for courses in child care in the public schools, (2) sources of the material for this survey, (3) analyses of the child care courses received, (4) a bibliography compiled from the material received and an annotated bibliography of material relevant to child care courses, (5) questionnaires used in the survey and a list of those furnishing material for this survey." Courses in child care are shown to be given most frequently in the high school years, in home economics departments, as a required subject in more than half the schools reporting, and to meet with a high degree of approval. Rose's "Feeding the Family," Holt's "Care and Feeding of Children," Hasbrouck's "Handbook for Teachers of Infant Hygiene," and the Children's Bureau bulletins on prenatal care, infant care, and child care are the text and reference books most frequently mentioned in the long and valuable bibliography of source material. At a time when many schools are organizing courses in this new and important field, such a survey as this will prove invaluable.

HARRIET R. HOWE,
Washington, D. C.

BOOKS RECEIVED

The World's Meat. By ROBERT JAMES MCFALL. New York: D. Appleton and Company, 1927, pp. 624. $6.00.

Facts regarding world production and commerce in meat brought together by a well-known writer on economic geography and food supply, formerly Cost of Living Commissioner in the Dominion of Canada. The chapters on production in various countries and on problems of marketing should be valuable for reference by classes in food economics.

Canning, Preserving, and Jelly Making. By JANET MCKENZIE HILL. New revised edition. Boston: Little, Brown, and Company, 1927, pp. 197. $1.75 net.

An attractively illustrated handbook by a popular writer on things culinary, for the woman who preserves small quantities of fruits and vegetables in her own kitchen; first published in 1915 and now thoroughly revised with time-tables recast, many recipes modified, and new ones added.

Unit Course of Study in Nutrition for One Year for Rural Schools. Grades I through VIII. Prepared by the American Red Cross Nutrition Service, Washington, D. C., in collaboration with the Department of Rural Education, Teachers College, Columbia University, New York City. Washington, D. C.: American Red Cross, 1927, pp. 212. $1.25.

A mimeographed outline prepared with the collaboration of Dr. Fannie Dunn, and intended primarily for the use of teachers. Includes 30 lessons with suggestions as to subject matter, illustrative material, activities, and references for each.

House and Home. A manual and text-book of practical house planning. By GRETA GRAY. Philadelphia: J. B. Lippincott Company, 1927, pp. 356. $3.00.

A new printing of a well-known manual first published in 1923.

Book of Little Houses. Edited by LUCY EMBURY HUBBELL. Garden City, New York: Doubleday, Page, and Company, 1927, pp. 128. $3.00.

The associate editor of *Garden and Home Builder* has here brought together many delightful pictures and plans of small houses and has supplemented them with discussions by specialists on such topics as the various national influences reflected in present-day homes, houses of different materials, and practical points in home-building.

History and Handwork for Young Children Aged 7 to 9. By F. E. PARKER. London: George Philip and Son, 32 Fleet Street, 1925, pp. 116. 6s. (American agent: C. S. Hammon and Company, 60–62 Franklin Avenue, Brooklyn, New York.)

A book of practical suggestions for handwork to be done by school children in connection with their study of English history; includes for each historical period dolls for the history scrap book, cooperative work by the class, and free work in paper cutting and mounting, clay modelling, or pastel drawing; also chapters on models of buildings and furniture, tableaux, making pictures of historical events and frieze pictures to show the development of ships and vehicles. Well provided with sketches and diagrams.

The Practice of Organized Play. Play activities classified and described. By WILBUR P. BOWEN and ELMER D. MITCHELL. Second edition, revised and enlarged. New York: A. S. Barnes and Company, 1927, pp. 238. $2.00.

An illustrated handbook for students in normal schools and colleges, in which plays and games are classified according to the type of game, with types arranged in order of the increasing ability of the players, from those of simple imitation like follow the leader to team games; with suggestions for play for special occasions and a bibliography.

Farm Income and Farm Life. A symposium on the relation of the social and economic factors in rural progress. Prepared by a joint committee: DWIGHT SANDERSON, chairman and editor; JOHN H. KOLB, M. L. WILSON, representing the American Country Life Association, ANDREW BOSS, F. D. FARRELL, O. G. LLOYD, representing the American Farm Economics Association. Published by means of a grant from the Institute of Social and Religious Research. New York: Published by University of Chicago Press for the American Country Life Association, 1927, pp. 324. $3.00.

An important report, the preparation of which was authorized in 1924 by the American Country Life Association; consists of 19 chapters each devoted to a different phase of the subject and discussed by one or more specially qualified writers; makes no pretense of solving all or any problems treated, but gives a concensus of expert opinion valuable to students of rural sociology and farm home economics. Of special interest to home economists are sections dealing with standards of living, social welfare and health, education and art in relation to rural life. Among the contributors are W. M. Jardine, L. H. Bailey, K. L. Butterfield, Eugene Davenport, H. C. Taylor, E. G. Mears, E. L. Kirkpatrick, and C. J. Galpin.

Value of Thrift. The golden thread of the world's life and activity. Talks for young people on the saving of talent, effort, time, and money. By EDMUND DANE. New York: G. P. Putnam's Sons, 1927, pp. 113. 90 cents.

A development of the idea that to make thrive means to provide the most favorable conditions of growth and that thrift, whether in plants or persons or social institutions, implies the best use of all available means

of development, including, in the case of human beings, personal and social resources as well as material goods.

Marriage and Careers. A study of one hundred women who are wives, mothers, homemakers, and professional workers. By VIRGINIA MACMAKIN COLLIER. New York: The Channel Bookshop, 279 Park Avenue, 1926, pp. 121. $1.00.

The question of how women actually combine marriage and careers answered from first-hand information collected for the Bureau of Vocational Information from women considered typical by the author. Their jobs, qualifications, and returns are analyzed and the following conclusions drawn: that in the cases cited essential elements of success are active, sympathetic cooperation from the husband, good health, good training and experience before marriage, and short or flexible hours of work; that suitable employment is more often but not exclusively found in larger cities; and that increased personal and family happiness is the chief result from this extra activity of the woman.

How to Make the Periodic Health Examination. A manual of procedure. By EUGENE LYMAN FISK and J. RAMSER CRAWFORD. Foreword by Major General Merritte W. Ireland. New York: Macmillan Company, 1927, pp. 393. $4.00.

The outgrowth of a smaller manual copyrighted in 1925; intended to meet the need of general practitioners who are obliged to fill the major part of the increasing demand for periodical health examinations, but useful also to those concerned with the organization of health education as it shows what the profession considers necessary for judging various physical conditions.

The New Medical Follies. By MORRIS FISHBEIN. New York: Boni and Liveright, 1927, pp. 235. $2.00.

Another volume of amusing but seriously-intentioned essays by the editor of the *Journal of the American Medical Association* who thus outlines its contents in the sub-title: "An encyclopedia of cultism and quackery in these United States, with essays on the cult of beauty, the craze for reduction, rejuvenation, eclecticism, bread and dietary fads, physical therapy, and a forecast as to the physician of the future."

The Psychology of Mental Disorders. By ABRAHAM MYERSON. New York: The Macmillan Company, 1927, pp. 135. $1.40.

An experienced psychiatrist, author of "The Nervous Housewife," and "The Foundation of Personality," here discusses mental disease for the benefit of the layman in the hope of removing the subject from the realm of mystery and stimulating an intelligent, non-professional interest in it so that society may "grapple more resolutely with the problems of mental diseases."

Eminent Chemists of Our Time. By BENJAMIN HARROW. Second edition, enlarged. New York: D. Van Nostrand Company, 1927, pp. 471. $2.50.

The enlargement of this book from the original version published in 1920 consists of some two hundred added pages which describe the work of the men whose lives are recounted in the original 240 pages.

Your Money's Worth. A study in the waste of the consumer's dollar. By STUART CHASE and F. J. SCHLINK. New York: The Macmillan Company, 1927, pp. 285. $2.00.

The Distribution Age. A study of the economy of modern distribution. By RALPH BORSODI. With an introduction of Lew Hahn. New York: D. Appleton and Company, 1927, pp. 321. $3.00.

Clothing: Fundamental Problems. A practical discussion in regard to the selection, construction, and use of clothing. By LOUISE E. BULGER JORDAN. Boston: M. Barrows and Company, 1927, pp. 379. $3.00.

ABSTRACTS FROM PERIODICALS

FOOD AND NUTRITION

Leigh-Clare, J. L. The effect of excessive radiation with ultra-violet light upon the growth of rats. *Biochem. J.* **21**, 208–210 (1927).

If the eyes of rats exposed to ultra-violet light are covered, prolonged irradiation is said to have no harmful effect, although being no more efficacious than shorter periods. It is considered preferable, however, to provide vitamin D by including an irradiated fat in the diet rather than by direct irradiation of the test animals.

Hume, E. M., Lucas, N. S., and Smith, H. H. On the absorption of vitamin D from the skin. *Biochem. J.* **21**, 362–367 (1927).

The authors have demonstrated that rickets can be prevented in rats and rabbits by the repeated application of irradiated cholesterol to a small area of depilated skin. This is thought to support the theory that the protection against rickets afforded by sunshine is due to the activation of lanolin and its subsequent absorption through the skin.

Rosenheim, O., and Webster, T. A. The parent substance of vitamin D. *Biochem. J.* **21**, 389–397 (1927).

This is the complete report of the investigation which has led to the conclusion that ergosterol, or a highly unsaturated sterol of similar constitution, is the impurity in ordinary cholesterol which is converted into vitamin D on irradiation. Various methods can be used to remove the ergosterol or provitamin from cholesterol and after this has been done the cholesterol can no longer be activated. Purification of cholesterol with charcoal removes the provitamin and consequently irradiated cholesterol which has been thus purified is of no value as a source of vitamin D. For this reason irradiated ergosterol is recommended as a more reliable source of vitamin D than irradiated cholesterol in vitamin A experiments. The amount of ergosterol present in ordinary cholesterol is estimated from spectroscopic examination to be of the order 1:2000. Although the limiting dose of irradiated ergosterol for the protection of rats has not yet been determined, daily doses of 0.0001 mg. have proved completely protective and it is thought that the limiting dose will be less than 0.00002 mg. "Irradiated ergosterol is therefore the most potent antirachitic substance known, 5 mg. being equivalent to approximately 1 liter of a good cod-liver oil. It is of interest to note that a dose 18,000 times greater than what is at present regarded as an effective dose produced no obvious ill effects on rats under the experimental conditions used."

Cammack, M. L. Equipping a laboratory for home economics research. *Food Facts* **3**, 22–23, 40–41 (1927).

This description of the laboratory which has been installed at the University of Arizona for research in foods and nutrition contains useful suggestions as to the arrangement of furniture, plumbing connections, and wiring, and the selection and arrangement of apparatus. A list with approximate cost of the portable apparatus with which the laboratory is equipped is included.

Gray, H., and Nicholson, S. T. The tallest American boys. *J. Am. Med. Assocn.* **88**, 2022—2024 (1927).

Further proof that American private school boys are taller than public school boys is given in a statistical analysis of data previously reported by the authors for private schools boys and by Baldwin for California gifted children and a comparison of these data with similar data reported by Benedict and Talbot for 886 boys from 8 New England private schools and with hitherto unpublished observations by Holt on 350 boys in a private school in New York City and by Faber on San Francisco public school boys. The boys from the private schools

exceed the public school boys in height at varying ages by from 3.1 to 10.6 cm. (or from 2.1 to 6.6 per cent) with a general average of 6.6 cm. (or 4.7 per cent).

Zlatogoroff, S. K., and Soloviev, M. N. Botulism in the Union of Socialist Soviet Republics. *J. Am. Med. Assocn.* **88,** 2024–2025 (1927).

According to the summary reported of the extent of botulism in Russia during the past 50 years there have been 12 outbreaks with 52 cases of poisoning and 35 deaths. All of these were caused by salt, smoked, or dried fish which is used without being cooked. Although the diagnosis of the earlier cases might be questioned, the identity of the "fish poison" as it was formerly called, with botulinum toxin is considered to be definitely proved by chemical and bacteriological evidence in the more recent cases. Evidence has been obtained that the toxin can remain in contaminated fish for long periods but that putrefaction and heating above 50° destroy it.

DeLorme, M. F. An experiment in the application of diabetic dietetics with report of one hundred cases. *J. Am. Med. Assocn.* **89,** 17–19 (1927).

An account of the operation in the retail business section of Brooklyn of a so-called "Diabetic Dining Room" in which patients referred by a registered physician are instructed in the necessary food calculations and dietary adjustments, urine tests, and insulin administration. The average time required by the 97 patients who have already completed the course was nine days with an average cost (including two meals a day with the exception of Saturday and Sunday) of $22. The chief purpose of the establishment of this dining room was to permit the patients to follow their usual occupation during training, which is not possible during ordinary hospitalization.

Salmon, W. D. On the existence of two active factors in the vitamin B complex. *J. Biol. Chem.* **73,** 483–497 (1927).

Convincing evidence from feeding experiments on both pigeons and rats is presented that vitamin B is composed of two active factors: "(1) A specific factor which prevents the occurrence of experimental beriberi in pigeons and rats and (2) another factor which does not prevent the occurrence of beriberi and is not in itself capable of inducing growth when it is added to the beriberi preventing factor." Velvet beans and soy beans were found to be rich in the first of these factors and relatively deficient in the second, and the leaves of the same variety of velvet beans and of rape rich in the second and deficient in the first. Some of the rats on small allowances of seeds showed a tendency to lose their fur in patches and to develop inflammation of the eyes, as reported by Goldberger and Lillie for rats on diets thought to be deficient in the pellagra-preventing vitamin. This would suggest the possible identity of the second of the two factors with the pellagra-preventing vitamin. In line with Goldberger's suggestion that this be called P-P the author suggests that the other factor making up the vitamin B complex be called B-P for beriberi-preventing factor. (See however J. HOME ECON. **19,** pp. 189, 190.)

Supplee, G. C., and Dow, O. D. The antirachitic and calcifying properties of summer- and winter-produced dry milk, irradiated and non-irradiated. *J. Biol. Chem.* **73,** 617–622 (1927).

Samples of summer-produced and winter-produced dry milk, Dryco, made by the Just double cylinder process were tested for antirachitic and calcifying properties before and after irradiation under identical conditions. The feeding of graded amounts of from 1 to 15 cc. daily of non-irradiated, summer-produced milk to rats on the Sherman-Pappenheimer rachitic diet 84 was followed by a progressive increase in the ash content of the bones up to 60.22 per cent. Similar amounts of non-irradiated winter-produced milk also caused a progressive increase in the ash of the bones but in amounts from 2 to 5 per cent lower than with the summer milk. Irradiated summer-produced milk gave results from 2 to 5 per

cent higher than the same milk non-irradiated up to the 9 per cent level but less than 1 per cent higher at the 15 per cent level. The results with irradiated winter milk were from 4.5 to 6 per cent higher at all levels than with non-irradiated winter milk. Comparable results in rachitic condition were obtained. At the 4 per cent level rickets was completely prevented only with irradiated milk, at the 9 per cent level with irradiated summer and winter milk, and at the 15 per cent level with non-irradiated as well as irradiated summer and winter milk.

The significant feature of these results is not so much the fact that winter-produced milk is lower in antirachitic and calcifying properties than summer-produced milk but that on irradiation it can be made as potent as irradiated, and more so than non-irradiated summer milk.

Mitchell, H. H., Beadles, J. R., and Kruger, J. H. The relation of the connective tissue content of meat to its protein value in nutrition. *J. Biol. Chem.* **73,** 767–774.

Experimental evidence is reported supporting the suggestion made in a previous paper by Mitchell (J. HOME ECON. **19,** 127) that the biological values of the protein of different cuts of meat vary inversely with the amount of connective tissue present. The biological value of the nitrogen of pork tenderloin containing a minimal amount of connective tissue was found to be 79, and that of pork cracklings, composed chiefly of connective tissue, 25. The biological values of a mixed ration containing 3 parts of tenderloin nitrogen to 1 part of cracklings nitrogen averaged 72. That some supplementary relationship existed between the two proteins was shown, however, by the fact that the calculated value of the mixture was only 65. Attention is called to the fact that biological values for the protein of various cuts of pork are much more constant than for various cuts of beef and that the amounts of connective tissue are comparatively constant in pork cuts but vary widely in the beef cuts.

Sherman, H. C. The vitamins. *J. Chem. Educ.* **3,** 1240–1247, 1416–1420 (1926), **4,** 66–72, 214–219, 323–326, 474–478 (1927).

A concise summary of present knowledge of the vitamins. The first paper deals with nomenclature and vitamin B and the next four with vitamins C, A, D, and E, respectively. The final paper contains a summary of the more important properties of the various vitamins and a table of their qualitative occurrence. Selected literature references are given at the end of each section.

Starin, W. A. The persistence of botulinum toxin in discarded canned foods. *J. Infectious Diseases* **40,** 579–584 (1927).

Botulinum toxin has been shown to be present on the surface of artificially inoculated cans after exposure to light, moisture, and temperature changes similar to those which might occur with discarded cans.

Reynolds, E. A. The relation between dietary habits and health of children in rural sections of Virginia. *Va. Agr. Expt. Sta. Bull.* **250,** pp. 39 (1926).

A publication in a series distributed on request in which is given a summary of recent nutrition investigations and a general discussion of the essentials of an adequate diet, followed by the report of an extensive study of the dietary habits and general state of nutrition of rural children in Virginia.

S. L. S.

TEXTILES AND CLOTHING

Contributed by the staff of the Division of Textiles and Clothing, Bureau of Home Economics, U. S. Department of Agriculture

Guernsey, F. H. The purpose and practice of souring. Part I. *Am. Dyestuff Reptr.* **16**, 307 (1927).

A "sour" is a chemical having an acid reaction. In the laundering and textile industries the term also includes some substances which are neutral in reaction but which have a capacity for absorbing alkali efficiently. Sours are used for several functions: To neutralize alkali which, if left in goods, will change the color of a normal white cotton or linen fiber from white to yellow; to remove stains soluble in acid, such as those made by iron rust and lime soaps; to bleach; to destroy the after-effect of the alkaline chlorine used in the bleaching bath; and to aid in the even distribution of bluing. The various sours affect textiles differently, the stronger ones attacking the fiber to form weak hydrocellulose and oxycellulose compounds, the highly crystalline ones filtering into the cloth and making rinsing difficult, and others producing a "scroop" or squeak, particularly if allowed to remain in the goods upon drying. The souring operation should be performed at a point in the whole process where it is certain that all of the soap has been rinsed away, otherwise soap specks will be produced. An amount of sour just sufficient to bring the goods nicely on the acid side is used. Adequate rinsing should follow the sour bath. The articles includes a table of relative neutralizing values of certain sours.—A. E. H.

Hathorne, B. L. Hosiery dyeing. *Am. Dyestuff Reptr.* **16**, 399 (1927).

The author emphasizes the fact that hosiery dyeing is difficult and complex. The chief requirements are fastness to washing, perspiration, and freedom from crocking. If a solid shade is desired, fastness to washing is not so important as in the case of stripes, checks, or other patterns. Much of the dyeing for sport hose is done in the yarn. With yarns that are not all wool the addition of two or three per cent of soluble oil makes for more even dyeing and softer yarns. The piece-dyed stocking has a softer feel than the yarn-dyed one. Wool yarn is in much better condition for knitting if no Glauber salt is used during dyeing. Hosiery made with a loosely knit leg of soft yarn and a tightly knit heel and toe of firmer yarns offers the most difficulty in dyeing. Another problem is to avoid friction marks, such as appear mostly on the toe and heel but occasionally on the leg. The loose construction of the leg is very favorable to undesirable felting. When different kinds of yarn are used in the same stocking, preliminary treatments are given and the author discusses actual mill methods of dyeing various combinations.—E. C. P.

Laundering qualities of summer suitings. *Bull. Laundryowners Natl. Assocn. & Am. Inst. Laundering*, May, p. 13 (1927).

Experiments conducted by Mr. Johnson, director of the department of research of the Laundryowners National Association, to obtain definite information as to the best methods of laundering summer suitings, resulted in the following conclusions and recommendations: Light-colored wash suits should be laundered and not dry-cleaned. Mere wetting in cold or luke-warm water causes the filling to stretch, while the cotton warp shrinks very slightly. In drying, temperature alone has very little effect upon shrinkage. Pounding action increases shrinkage and should be reduced as much as possible. The following precautions are suggested: High water levels should be used for both suds and rinses; the wash wheel should be stopped while it is being drained and filled. Small lots of garments should be washed at a time; high suds should be used. The tables accompanying the article show the shrinking and stretching of various suitings.—A. E. H.

Duerden, J. E., and Bosman, V. Absence of uniformity in growth of the merino fleece. *J. Textile Inst.* **18,** T191 (1927).

The average rate of growth of the merino fleece is about 0.01 inch per day and investigation shows that the growth is uniform throughout the twelve months. However, the vigor of growth determined by the thickness of the fiber was shown to vary, at least in the fleece observed, and to be less vigorous at the end of the season than at any other time. Little or nothing was known of the conditions under which the particular samples were grown. A correlation between variations in thickness of the fleece and changes undergone by the sheep offers a valuable problem for future investigation.—E. C. P.

Mullin, Charles E. The ioanamine dyestuffs on acetate silk. *Textile Colorist* **49,** 377 (1927).

The greatest development in the application of dyestuffs to acetate silk has been in the use of the Ionamine dyes of the British Dyestuff Corporation. Experimentation has shown that the dye should contain amino, substitute amino, or hydroxyl groups, preferably without the presence of salt-forming groups; and the free base should be partly soluble in water. The actual products used are the omega-sulfonic acids of amino compounds and are called Ionamines. Those which have the greatest affinity for acetate silk have the least affinity for cotton, and vice versa. The colors available vary from yellow and orange to scarlet, red, maroon, violet, blue, and black; no brown or direct black is available at present. The chief advantages of Ionamines are their solubility in water, the fact that they are not precipitated by acids, alkalies, or salt, and that under certain conditions they can be applied in the same dyebath with cotton dyestuffs. A difficulty may arise in obtaining a wide range of dyes that will hydrolyze at approximately the same rate under similar conditions in the dye bath. Methods of application of the dyes to acetate silk are described in detail.—L. R.

Fleming, Horace. Making wool unshrinkable by chlorine. *Textile Colorist* **49,** 383 (1926).

One method of making wool unshrinkable is by working it in a mixture of clear bleaching powder and hydrochloric acid. The material is immersed for fifteen minutes in a vat of chlorine of lime, then for the same period in another vat of acid solution, after which both immersions are repeated. Following this treatment the wool is washed in cool water, then in a solution of bisulfite of soda to remove all traces of chlorine and the yellow color which it may have acquired. If the chlorination is allowed to go too far, the scales on the fibers disappear, the fibers go to pieces, and the wool loses its strength. If the process is stopped at the right time, the scales tend to adhere closely to the fibers.

Other effects of this process are: increased affinity for dyes, a harsher feel, a loss of strength and elasticity, greater solubility in water, greater hygroscopic capacity, and loss of felting power.—L. R.

CHILD DEVELOPMENT AND PARENTAL EDUCATION

Reaney, M. J. The importance of play in the education and recreation of children. *Child* [London] **17**, 263–264 (1927).

Young animals through play practise and prepare for their adult activities. Children pass through four periods with characteristic types of play: from birth to six years, experimental, imitative, and imaginative; from six to nine, hunting, fighting, and chasing; nine to twelve, rivalry and competition; after twelve, coöperative and group play. Adults also need and enjoy games. To provide adequate play facilities, five acres of suitable land for each thousand of population should be set aside.

Hanna, Agnes K. Analyses of child-care teaching in mothers' classes and little mothers' classes. *Child Health Bull.* **3**, 101–109 (1927).

A report of types of instruction given by several of the state departments of child hygiene through schools, self-directed study groups, classes and lectures for mothers, and lesson materials, with recommendations for furthering groups teaching child care.

Alshuler, Rose H. Nursery school conference. *Child Health Bull.* **3**, 109–111 (1927).

Report of the conference of nursery school workers held in New York in April, at which such nursery school problems as daily programs, activities, materials, physical well-being, budgets, housing equipment, training of teachers, and education of parents were considered. A national committee on nursery schools was organized.

An amateur nursery school. *Childhood Educ.* **3**, 477–480 (1927).

The practices and conclusions from a neighborhood nursery school as reported by a mother-teacher.

Hardy, Marjorie. Right attitude toward books and taste in reading in the primary school. *Elementary School J.* **27**, 745–750 (1927).

By keeping a wide variety of attractive books in the school room, by inviting the child to bring pertinent books from home, by reading, talking about, and comparing those in the group a sense of values and growth of taste is developed.

Schmidt, Rowena. Integrating the pre-school child. *Food Facts* **3**, 14–16 (June, 1927).

The results of various specialized researches which contribute to our understanding of the child as a whole reach the home through the pediatrician, the psychiatrist, the social worker, the nutritionist, the nursery school, and lectures and publications on parental education.

Wile, Ira S. Conduct disorders of children. *J. Am. Med. Assocn.* **88**, 1222–1227 (1927).

Conduct disorders in children arise from internal biologic conditions, either congenital or acquired, such as tallness, fatness, myopia, superior or inferior mentality, which though inherent in the organism profoundly influence the social reaction to the environment; from environing forces such as parental dominance or oversolicitude, neglect, lack of recreational facilities, school inelasticity; or from a combination of these two. The disorder itself must be looked upon as a symptom only for which the cause must be found. Thus stealing may result from such widely different causes as jealousy and encephalitis, and a given cause, as myopia, may produce widely varying conduct results such as fatigue, truancy, or tantrums. Not only is the child's environment constantly changing but he himself is passing through growth phases, hence conduct disorders may be occasional, periodic, or habitual, varying with time, place, and circumstance, and with the age of the child. Successful treatment depends upon consideration of the whole situation and the child in his relation to it, rather than attention to the conduct disorder itself.

Lehman, H. C., and Witty, P. A. Play activity and school progress. *J. Ed. Psychol.* **18**, 318–326 (1927).

A study of 6886 children of widely vary-

ing progress quotients showed no difference in the number or diversity of play activities engaged in, but considerable variation in type. Pedagogically retarded children showed greater interest in play activities providing social contacts than did normal children. Little variation between accelerated and normal progress children is shown but it is held significant that acceleration did not reduce "either the number of different play activities engaged in nor the extent to which the child participated with others in recreational activities."

Committee on Child Development, Natl. Research Council. *Selected child development abstracts*, **1**, 1–76 (1927).

The first of what is planned to be a regular series of mimeographed publications in which are brought together for convenience in use abstracts originally prepared for certain journals in the field of child development. The present issue includes abstracts taken from the early issues of the *American Journal of Diseases of Children*, *Biological Abstracts*, *Chemical Abstracts*, *Psychological Abstracts*, *Archives of Neurology and Psychiatry*. The second issue, to contain abstracts from other cooperating journals covering the same period, will appear shortly. Copies of this number may be obtained from the National Research Council for a nominal price.

Chadwick, Mary. The whence and whither of day dreams. *New Era* [London] **8**, 58–61 (1927).

Day dreams, a normal indulgence in childhood to compensate for life's difficulties, show these phases: 1. Early infantile, when the dreamer, omnipotent, receives universal homage; 2. the oedipus complex, the unconscious sex conflict between child and parents; 3. the latency period, when interest centers in one's peers, but with strong ambition for leadership over them; 4. adolescence, when all experiences are reviewed, especially the factors of the oedipus complex. Too great or lasting satisfaction in phantasies results in withdrawal from reality and the pathological personality. If day dreams can be shared through their expression in literature or art there is satisfaction to the creator, while the success of the production attests to its coincidence with the phantasies of others. Arrest in development may occur at any stage of the normal progress described, and grave consideration should be given to the influence of parents and teachers. The popular method of teaching history by enacting historical episodes may be of danger to nervous children in that it may infringe upon their own day dreams, or force them to play psychologically revolting parts.

Brown, Eleanor P., and Royer, Jessie R. Should the eyes of little children be tested? *Public Health Nurse* **19**, 259–262 (1927).

A method for determining the visual ability of children over three years of age is described in the belief that much serious trouble can be averted by testing the eyes of young children, not for the sake of vision alone but because of other physical and mental ills which frequently result from poor eyesight.

Sweeny, Mary F. Feeding children in the Merrill-Palmer School. *Public Health Nurse* **19**, 270–273 (1927).

A summary of the feeding practices adopted, after five years of observation and study, in the Merrill-Palmer School, as medically, nutritionally, and psychologically sound for normal healthy children. The daily energy requirement of 3-year olds is 45, of 4-year olds, 41 calories per pound of body weight. The quantity of food is based on the expected weight for the actual height, and one-half the day's requirement is given at the noon meal. One quart of milk daily is advised and this quantity is not found to prevent the children from taking an adequate amount of other food. One egg, or its equivalent in meat or fish once a week, is given daily, also sandwiches containing raw chopped cabbage, lettuce, or celery. Menus show a wide variety in foods and methods of preparation, with the attempt to make each dish a perfect product.

"Crazes." *Times* [London] *Educ. Sup.* **633,** 283 (1927).

Children of from 8 to 12 years of age are subject to three types of "crazes;" doing something every one else is doing, possessing something every one possesses, and collecting something every one else collects. The first two are common among pre-adolescents, the third among children over ten and a half. Teachers may utilize these crazes in making class collections of historical, geographical, and natural science material brought by the children and organized by the teacher. Interest in new collections and in "making" things can often be stimulated by introducing models to supply new interests to adolescent boys. Undesirable crazes often become epidemic and are best suppressed by enlisting group support.

H. R. H.

NOTES AND CLIPPINGS

Farm Population of the United States. The analysis of 1920 census data on this subject, with a comparison with urban data and with a study of the main economic factors affecting farm population by Leon E. Truesdell, has been issued by the U. S. Department of Commerce, Bureau of the Census. The large octavo volume of 536 pages may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C., for $1.75.

What is Malnutrition? This bulletin by Lydia J. Roberts, first published in 1919, has been revised and issued as U. S. Department of Labor, Children's Bureau Publication No. 59. Copies may be purchased from the Superintendent of Documents at 5 cents each.

A Good Egg. A poster intended to help in the household judging of eggs has been prepared by the U. S. Department of Agriculture. It is in colors, 14 x 20 inches, and will be sent on request to those wishing to display it.

Bureau of Home Economics Documents. Three mimeographed documents are available for distribution on request to the Bureau of Home Economics, U. S. Department of Agriculture: A selected list of government publications on housing and equipment, compiled by Ruth Van Deman, Home Economics Bibliography 2, mimeographed; The quantity, money value, and nutritive value of food consumed by 86 farm families in Franklin County, Vermont, in 1923-24, by Edith Hawley, food economist, Bureau of Home Economics; Average clothing expenditures of 86 farm families of Franklin County, Vermont, during 1923–24, by Edna L. Clark, associate home economist, Bureau of Home Economics.

Rabbits. Breeding rabbits for fur and meat has reached sufficient importance for bunny to have an organization and a journal of his own. The American Rabbit Association, with headquarters at 447 Hewitt Street, Los Angeles, aids rabbit men in obtaining breeding stock, selling skins, shipping live rabbits, and giving practical information on keeping rabbits. It also issues a small periodical, *Fur Rabbit Review*, and has prepared a list of books on the subject.

Fur Names. A revision of the "Dictionary of Fur Names," originally published in the 1925 Yearbook of the Fur Industry of the United States has been by Bridgewater M. Arnold and printed in the June issue of *The Fur Journal*. The definitions are made in accordance with principles laid down by the London Fur Trade Association and by advertising authorities in the United States.

Posture. "A Résumé, with Comments, of the Available Literature Relating to Posture," by Louis Schwartz, is published in *Public Health Reports* for May 6, 1927. In the author's opinion there is decided lack of agreement regarding definitions of good posture, factors affecting postures, and no universally satisfactory test for

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physical fitness. A bibliography of 154 titles is appended. Copies of the documents may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C., for 5 cents each.

Physique and Civilization. In contrast to the theory that primitive peoples have better physique and especially better teeth than civilized, are statistics from 6,000 Bantu children of the Transvaal which are quoted by *Hospital Social Service* from *The World's Children*. Less than 25 per cent were found to be free from dental defects and over 45 per cent had at least slight physical defects due chiefly to malnutrition.

What High School Girls Do. A study of twenty-four-hour schedules voluntarily kept by forty girls in the Lincoln High School is reported by Sarah M. Sturtevant and Ruth Strang in *Teachers College Record* for June. The conclusion is that such schedules may yield information valuable to the teachers and advisers of the individual girls and also to those carrying on educational and social research.

Reduction of Noise. Research work designed to reduce the noise produced by the operation of street cars, airplanes, automobiles, ventilating and refrigerator plants is being undertaken by the Bureau of Standards cooperating with public utility and industrial corporations, according to a recent announcement from the Bureau.

National Picture Week. The American Art Bureau is again sponsoring national observation of a week in which stores, schools, clubs, and art societies are asked to emphasize the importance of good pictures in homes and schoolrooms. The dates set for 1927 are October 10 to 20 and leaflets and suggestions may be obtained from the American Art Bureau, 166 West Jackson Boulevard, Chicogo, Illinois.

Bunyan's "House Beautiful." At the instigation of Professor A. E. Richardson, professor of architecture at the University of London, private generosity is making possible the preservation for the nation of Houghton House, Ampthill, Bedfordshire. According to the London *Times Educational Supplement*, this house is famous not only for its connection with "Pilgrim's Progress," but also by association with three famous English architects, John Thorpe, Inigo Jones, and Sir William Chambers.

Motion Pictures for a Museum. The Fogg Museum of Harvard University has made plans for a permanent collection of films carefully selected for their artistic merit, says the *Educational Screen*. The nucleus will be a selection of those made during the past fifteen years, to which will be added annually the best films of the preceding year. Chairman of the committee on selection is Professor Chandler R. Post of the School of Business Administration, whose qualifications include thorough knowledge of both the business and the artistic features of motion pictures.

Novelties in Pavements. Tiles of various colors, such as yellow, brown, and blue, are being used in paving streets in Stockholm and other Swedish cities. Consular reports published by the U. S. Department of Commerce say that they are as durable as stone, cost less, give an attractive appearance to the streets, and that exports to Germany and Denmark are steadily increasing. A consular report from Australia says that in Melbourne the use of rubber paving blocks is a future possibility, as a means of eliminating noise near hospitals and churches, though as yet the expense is too great, being more than three times that of asphalt and twice that of wood blocks.

Children's Police. Principal cities in Holland have special children's police, says a release from the U. S. Children's Bureau. They supervise children's street trading, investigate unsatisfactory home conditions, guardianship, and truancy and other delinquencies, and work in close cooperation with juvenile courts and child welfare institutions.

Boy-Built Houses. Better Homes in America has issued a 36-page illustrated bulletin by Blanche Halbert, describing "A school project method of training boys for house building," and based largely on the results of work done by school boys in connection with the annual Better Homes Demonstrations. Copies of the bulletin may be obtained for 10 cents each from Better Homes in America, 1653 Pennsylvania Avenue, Washington, D. C.

Dryad Handicrafts. Home economists interested in the excellent booklets issued by the Dryad Handicrafts of Leicester, England, will welcome the announcement that the Manual Arts Press, Peoria, Illinois, has arranged to act as their American distributor.

Occupations for Home Economists. Laura V. Clark is the author of "A study of occupations, other than homemaking, open to women trained in home economics," recently published by the Division of Vocational Education as Homemaking Education Series, No 1, Leaflet No. 5, of the University of California. The principle types of positions described are those of teacher, dietitian, tea room manager, extension worker, and with commercial firms, the latter being based largely on information obtained from the Home Economics in Business Section of the American Home Economics Association. Few definite statements are made as to salaries.

History of Lighting. A popular article by Marjorie MacDill in *Science News Letter* for July 9 contains interesting facts regarding early lighting devices.

Parent-Teacher Association. The history of the parent-teacher movement by Margaretta W. Reeve and of the program, service, trends, and expenditures of such associations by Ellen C. Lombard, are brought up to date in Bulletin 1927 No. 11, of the U. S. Department of the Interior, Bureau of Education, issued as advance sheets from the Bureau's Biennial Survey of Education in the United States.

Mental Clinics. The National Committee for Mental Hygiene, 370 Seventh Avenue, New York City, announces the publication of a 57-page monograph by Mary C. Jarrett entitled "Mental Clinics: An Account of Their Development in the United States."

Boys' Work. An interesting development in the Welfare Council of New York is the formation of a Boys' Work Section in which thirty organizations concerned with the problems of New York City's half million boys are cooperating.

Signs of Health in Childhood. The picture of the optimal child and some suggestions as to how the ideal may be attained are given in this well-organized, attractively-printed pamphlet by Drs. Hugh Chaplin and Edward A. Strecker recently issued by the American Child Health Association. It is said to have been prepared in response to a request received some years ago from the Extension Service of the U. S. Department of Agriculture and is in line with much of the health education work now promoted in schools and home demonstration work. Copies may be purchased for 25 cents each from the American Child Health Association, 370 Seventh Avenue, New York City.

Home Economics in National Canners' Association. Ruth Atwater, formerly on the faculty of Pratt Institute and more recently at Skidmore College, has accepted the position as director of the Bureau of Home Economics which the National Canners' Association has just organized after several years' search for a woman to head it who should combine thorough scientific training with knowledge of the home economics field.